Jurisdictional Urban Runoff Management Program

ANNUAL REPORT 2011 FISCAL YEAR

City of San Diego

think BLUE SAN DIEGO

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CITY OF SAN DIEGO JURISDICTIONAL URBAN RUNOFF MANAGEMENT PLAN FISCAL YEAR 2011 ANNUAL REPORT

SUBMITTED TO:
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
9174 SKY PARK COURT, SUITE 100
SAN DIEGO, CA. 92123

SEPTEMBER 30, 2011

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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EXECUTIVE SUMMARY

San Diego is a beautiful city with a picturesque coastline and abundant aquatic resources and wildlife. San Diego also has many natural surface water resources—creeks, beaches and bays—providing miles of recreational opportunities for residents and serves as the centerpiece to San Diego's tourist industry. The potential pollution of these resources threatens the social and economic quality of life within the region. Preserving San Diego's natural water resources through the reduction of pollutants in storm water and urban runoff is one of the most important goals of the City of San Diego (City). The Transportation & Storm Water Department is designated as the lead City agency to achieve this goal. Urban runoff is an inevitable result of how a modern urban metropolitan society lives its daily life. Reducing urban runoff and improving water quality is reliant upon significant efforts by the City:

- A commitment to continual improvement in the effectiveness s of the City's water quality protection services at the lowest possible cost
- Changing the behaviors of the residents, employees and businesses that call San Diego home
- Best available water quality science to identify sources and solutions for pollution
- A commitment to abating pollution sources with proactive education, incentive and enforcement programs

The City reorganized its streets and drainage related functions to form a new Transportation & Storm Water Department in Fiscal Year (FY) 2011. The reorganization and consolidation of management responsibilities has improved the planning, operations, control and coordination of work within the right-of-way.

The City of San Diego implemented numerous efforts during FY 2011 to both protect and restore water quality in its creeks, rivers, beaches, and bays on a jurisdictional, watershed and regional level. This Annual Report summarizes the jurisdictional efforts implemented by the City of San Diego during the respective reporting period and some of the key program highlights are included below.

Program Accomplishments

Development and Construction

Land Development is one of the key areas where pollutant generation can be prevented by addressing the pollutants at their source through storm water friendly planning and design. As such, the City emphasizes the importance of urban runoff requirements as project applicants complete the development process. During FY 2011 the City required appropriate priority development project (PDP) requirements, including Low Impact Development and treatment control BMPs. The City had a total of 113 private PDP projects and 4 capital improvement PDPs. Additionally, 206 private development sites who had constructed treatment control BMPs in past years were visited for inspections to determine their effectiveness at treatment of urban runoff. In addition to completing the requirements of the City's JURMP Activities for Development Planning during the reporting period, the City also implemented an improved Threat to Water Quality (TTWQ) prioritization system for Treatment Control Best Management Practices (TCBMPs) to replace the original system that did not yield any high TTWQ projects. From planning and design, projects move into the construction phase of development. The City performed over 59,000 construction inspections in FY 2011 for 17,919 construction projects, and in general, the inspection process found project sites were in compliance with BMP implementation. In some instances, corrective actions or higher level of enforcement were necessary to obtain compliance.

Municipal Activities

The City continued to place emphasis on storm water pollution prevention practices and awareness in all activities at municipal facilities and field operations in FY 2011. Efforts conducted include:

- Inspections and appropriate follow-up at over 700 facilities
- Collection of 5,630 tons of debris and sediment by conducting street sweeping of more than 80,000 miles and parking lot sweeping of 450 parking lots.
- Inspection of every channel within the City twice and removal of more than 19,000 tons of anthropogenic litter and sediment from 1.9 miles of channels
- Inspection of 33,833 inlets, catch basins and cleanouts
- Cleaning over 16,000 inlets, catch basins and cleanouts and 2.6 miles of pipeline which resulted in the removal of approximately 13,146 tons of debris and sediment

Another broad indicator of the effectiveness of the City's municipal program efforts to improve water quality is the reduction of public sewer spills – a direct and major contributor of indicator bacteria to surface waters. In 2000 there were 365 sanitary sewer spills; in FY 2011 there were only 40, an 89 percent reduction since 2000.

Industrial and Commercial Programs

The City continued to expand its industrial and commercial programs in order to institute effective measures to reduce pollutants and comply with the Municipal Permit. The City currently has an inventory of approximately 18,574 stationary facilities and 5,820 mobile businesses. The City inspected 100% of all stationary sites determined to pose a high threat to water quality. Approximately 34% of the City's commercial and industrial inventory received site visits and/or inspections. This represents more than 1,600 additional inspections conducted than are required by the City's JURMP. During FY 2011, the Storm Water Division focused on improving database tracking of inspections, follow-up and enforcement to effectively track compliance and utilize resources efficiently. Several BMP Knowledge and BMP Implementation assessments are conducted during industrial and commercial inspections. These assessments were conducted during the inspection of industrial and commercial businesses to help gauge the knowledge and awareness of the regulated business community in implementing BMPs to prevent discharges. Overall, the businesses assessed show a mostly moderate understanding (score of 3 out of 5) of urban runoff issues and the implementation of BMPs.

Education and Outreach

June 30, 2011, concluded the eleventh year of the *Think Blue* Media, Education, and Public Advocacy Campaign. The campaign was able to put forth a broad, multifaceted effort, which included targeting external audiences as identified in the Municipal Permit (municipal departments and personnel, construction site owners and developers, industrial/commercial owners and operators, mobile businesses, and residential community, general public and school children), participating in grant funded education and outreach activities, and actively participating in regional outreach and education efforts with other Copermittees. One of the most impactful methods of direct outreach has been the use of special events where the City uses booths to make direct contact with the target audiences. In FY 2011 the City's *Think Blue* messages to the general public made over an estimated 55,900,000 impressions through PSA airtime, placement on media websites, and PSAs in movie theaters. Internal education provided over 1,500 City staff with both general storm water education as well as job-specific storm water training.

Monitoring

In addition to participating in regional monitoring efforts with the San Diego County Regional Copermittees, the Storm Water Division conducts a City specific Dry Weather Monitoring (DWM) Program and Coastal Storm Drain Monitoring Program. The DWM Program is designed specifically to detect and eliminate illicit connections and illegal discharges to the storm water conveyance system using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Typically the Storm Water Division's DWM sites are located at storm drain outlets, manholes, or storm drain catch basins. The City performs Trash Assessments as a part of its monitoring program as well. Information on the City's Dry Weather Monitoring Program and Trash Assessments for 2011 will be included in the Illicit Discharge Detection and Elimination Component (Section 7 of this report) submitted to the Regional Board on December 15, 2011.

Special Projects

In FY 2011, the City continued to take actions towards water quality improvements as organized in its *Strategic Plan for Watershed Activity Implementation (Strategic Plan)*. The purpose of the *Strategic Plan* is to identify the most effective activities to address the highest priority pollutant sources in the highest polluting areas. There are many pollutant sources to address and an equally large list of potential activities from which to choose. By prioritizing the problems and ranking the solutions based on effectiveness, this approach maximizes City resources in protecting and improving water quality. The City implemented many special projects during FY 2011 and descriptions and updates of the special projects are included in the City's Watershed Urban Runoff Management Program Annual Reports submitted to the Regional Water Quality Control Board on January 31, 2011.

Future Directions

The City's overall program implementation continues to be a success. There are many program areas where the City has exceeded the implementation requirements, such as commercial/industrial inspections. Additionally, the City continues to be a leader in the region by conducting special studies and pilot projects aimed at identifying the highest threat to water quality sources and the most efficient and effective methods of mitigating those pollutants. To continue program improvements in FY 2012, the Transportation & Storm Water Department Storm Water Division will focus a portion of its overall efforts on the following areas:

- Continue strategic, integrated approach to planning program efforts;
- Refinement and/or expansion of the Storm Water Division's data management and tracking capabilities to ensure permit compliance;
- Identification of data gaps and collection procedures to be modified to assist in activity and program effectiveness assessment; and
- Identification of program areas for adaptive management opportunities by utilizing findings from pilot projects, special studies, or general program implementation feedback.

Additionally, the City will continue to pursue alternative funding sources for urban runoff management and water quality protection to support the anticipated expansion of the programs over time. As part of these efforts, the City will continue to partner with other stakeholders to develop water quality projects in order to compete for grant funds and leverage outside sources of funding. Staff will continue to work closely with other storm water program managers in the region to collaborate on program implementation strategies.

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1 INTRODUCTION

1.1 PROGRAM OVERVIEW FOR FISCAL YEAR 2011

The City of San Diego (City) has prepared this Jurisdictional Urban Runoff Management Program (JURMP) Annual Report for Fiscal Year (FY) 2011 in compliance with San Diego Regional Water Quality Control Board (RWQCB) Order R9-2007-0001 (Municipal Permit). The purpose of the report is to provide an account of the programmatic activities conducted by the City to meet the requirements of the Municipal Permit and the City's JURMP.

During FY 2011, the City restructured several of its departments, including the Storm Water Department, which merged with another department to form the Transportation & Storm Water Department. An organizational chart for this new department is provided at the end of this section. As before, the Transportation & Storm Water Department's Storm Water Division serves as the lead department for the efforts of the City to reduce pollutants in urban runoff and storm water to the maximum extent practicable and achieve compliance with Municipal Permit.

The Storm Water Division is actively engaged in a number of activities that will cumulatively result in both the protection and improvement of storm water quality. The Citywide blueprint for protecting storm water quality is the JURMP, which was adopted by the City Council on January 22, 2008. The primary activities that the City continues to implement include, but are not limited to: public education; employee training; storm water quality monitoring; source identification; code enforcement; watershed management; and storm water best management practices (BMP) development and implementation within the City's jurisdictional boundaries.

Under its legal authority, the City implements the JURMP only within its jurisdictional boundaries. However, the City also implements the Watershed Urban Runoff Management Plan (WURMP), Regional Urban Runoff Management Program (RURMP), and Total Maximum Daily Load (TMDL) programs in conjunction with other stakeholders and jurisdictions to improve storm water quality in the region. These programs are not only implemented within the City's jurisdictional boundaries, but on watershed-scales under the auspices of the Municipal Permit.

1.2 REPORT ORGANIZATION

This FY 2011 Annual Report has been organized into sections matching the table of contents agreed upon and submitted by the Copermittees to the San Diego RWQCB. The City has modified its reporting format to tabulate applicable data and information in an effort to streamline the report presentation. **Figure 1-1** represents the basic format for the majority of the report.

Under the requirements of the Municipal Permit various types of data and information must be presented in JURMP Annual Reports. Quantifiable data and required confirmations are presented directly in the tabular format. However, in some cases, further descriptions or explanations of results are required. When this occurs, the supporting narrative is supplied in the sections following the tables, and referenced within the table itself. Lastly, some of the required information (e.g., inventories) is best included as appendices. In these cases, their locations are also referenced in the table.

Municipal Permit Requirements | **Reporting Results**

No.	Program Implementation Description	Confirmation and/or Result
1	Any updates to the industrial and commercial inventory.	See Appendices H and I for inventory update.
2	Confirmation that the designated BMPs were implemented, or required to be implemented, for industrial and commercial sites/sources.	Confirmed per the City's JURMP Appendix X. Designated BMPs were required to be implemented at industrial and commercial sites.
3	A description of efforts taken to notify owners/operators of industrial and commercial sites/sources of BMP requirements, including mobile businesses.	See 5.2.1 below for description.
4	Identification of the total number of industrial and commercial sites/sources inventoried and the total number inspected.	**Inventoried:** 24,395 (18,574 stationary facilities and 5,821 mobile) **Inspected:** 6,300 facilities (See Appendices J and K)
5	Justification and rationale for why the industrial and commercial sites/sources inspected were chosen for inspection.	See Section 5.2.2 below.
6	Confirmation that all inspections conducted addressed all the required inspection steps to determine full compliance.	Confirmed per the City's JURMP Section 7.2.4. See Section 5.2.3 below for description.

1

REFERENCE INFORMATION

Provides references for the reporting information such as appendices to the report.

2

DESCRIPTIVE RESULTS

Any reporting results that need further descriptions, or explanations will be noted in the table and provided as text in the sections below the table.

3

REPORTING RESULTS

Reporting information that can be reported solely in the table (i.e. numbers, confirmations, etc.)

Figure 1-1: Reporting Format Description (for illustrative purposes only)

1.3 REPORTING PERIOD

This Annual Report provides information for the FY 2011 reporting period from July 1st, 2010 to June 30th, 2011.

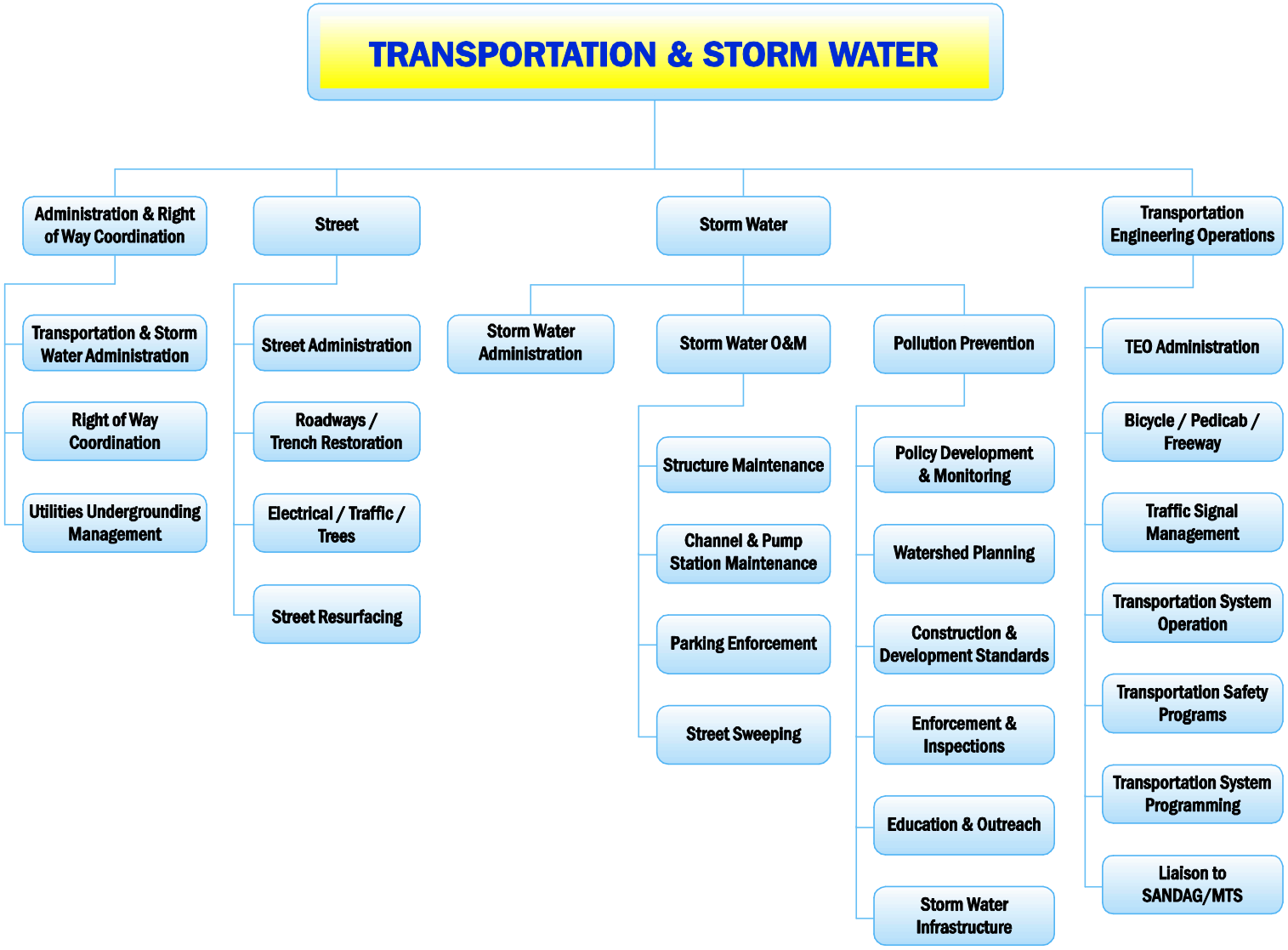

Figure 1-2: Transportation & Storm Water Organization Structure

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2 DEVELOPMENT PLANNING

2.1 PROGRAM IMPLEMENTATION

Table 2-1 represents the City of San Diego's implementation of the Development Planning component as it relates to the requirements of the Municipal Permit during FY 2011. Where reporting requirements necessitate information that is not easily tabularized, references are made in the table to locations where the information, or explanations, is located.

During FY 2011, the City was compliant with all elements of Section D.1 of the Municipal Permit, with the exceptions of those issues identified in the table below.

Table 2-1: Development Planning Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	A description of any amendments to the General Plan, the environmental review process, development project approval processes, or development project requirements.	See 2.2.1 below for descriptions.
2	Confirmation that all development projects were required to undergo the Copermittee's urban runoff approval process and meet the applicable project requirements, including a description of how this information was tracked.	Confirmed See 2.2.2 below for description.
3	A listing of the development projects to which Standard Urban Stormwater Mitigation Plan (SUSMP) requirements were applied.	See Appendix A
4	Confirmation that all applicable SUSMP BMP requirements were applied to all priority development projects, including a description of how this information was tracked.	Confirmed See 2.2.2 below for description.
5	At least one example of a priority development project that was conditioned to meet SUSMP requirements and a description of the required BMPs.	See Appendix B for examples
6	A listing of the priority development projects which were allowed to implement treatment control BMPs with low removal efficiency rankings, including the feasibility analyses which were conducted to exhibit that more effective BMPs were infeasible.	No PDP were allowed to implement BMPs with low-removal rankings, and therefore no such feasibility analyses were conducted
7	An updated treatment control BMP inventory.	See Appendix C. See also 2.2.3 for a summary
8	The number of treatment control BMPs inspected, including a summary of inspection results and findings.	206 private sites inspected 36 municipal sites inspected See 2.2.3 below for summary
9	100% of projects with high priority TCBMPs were inspected.	44 projects were rated as high priority and all the 44 were inspected

Item No.	Program Implementation Description	Confirmation and/or result
10	Confirmation that the high priority TCBMPs were inspected prior to the rainy season	Confirmed. See Section 2.2.3 below
11	At least 50% of projects with drainage insert TCBMPs were inspected.	Approximately 51% of the City's inventory of public and private TCBMPs with drainage inserts were inspected
12	A minimum of 20% of the total number of projects with approved TCBMPs, and a maximum of 200% of the average number of projects with TCBMPs approved per year were inspected.	Approximately 41% of the City's TCBMP project inventory was inspected
13	A description of the annual verification of operation and maintenance of treatment control BMPs, including a summary of verification results and findings.	See 2.2.3 below for description and summary
14	Confirmation that BMP verification was conducted for all priority development projects prior to occupancy, including a description of how this information was tracked.	See 2.2.4 below for description.
15	A listing of any projects which received a SUSMP waiver.	Not applicable. No Waiver Program in place, and no waivers issued
16	A description of implementation of any SUSMP waiver mitigation program.	Not applicable. No Waiver Program in place and no waivers issued
17	A description of Hydromodification Management Plan (HMP) development collaboration and participation.	See 2.2.5 below for description
18	A listing of development projects required to meet HMP requirements, including a description of hydrologic control measures implemented.	No projects were required to meet HMP requirements. Appendix A includes a listing of the projects not required to meet HMP requirements.
19	A listing of priority development projects not required to meet HMP requirements, including a description of why the projects were found to be exempt from the requirements.	
20	A listing of development projects disturbing 50 acres or more, including information on whether Interim Hydromodification Criteria were met by each of the projects, together with a description of hydrologic control measures implemented for each applicable project.	
21	The number of violations and enforcement actions (including types) taken for development projects, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.	See 2.2.6 below for discussion
22	A description of notable activities conducted to manage urban runoff from development projects	See 2.2.7 below for descriptions

2.2 DISCUSSION SUPPORTING TABLE 2-1

2.2.1 Table 2-1 Item No. 1

General Plan Amendments (Community Plans)

Community Plan (extensions of the General Plan) activities that occurred during FY 2011 related to storm water include:

Chollas Triangle Master Plan – The Chollas Triangle Master Plan will incorporate recommendations concerning the reduction of urban runoff and storm water quality in the final development of the Master Plan. The plan area is bounded by 54th Street to the West, University Avenue to the North, and Chollas Parkway (including Chollas Creek) to the south and east. Storm water quality plays a significant role in the Master Plan process since Chollas Creek is a component of the plan area. Furthermore, surface run-off drains towards the creek, with some existing site drains emptying directly into the creek. A primary recommendation currently being developed for the plan is the restoration of the creek, consistent with the Chollas Creek Enhancement Program, which includes the reduction of pollutants that enter the storm water system from nearby uses. Another goal to be included in the plan will be to ensure a reliable system of water, storm water, and sewer facilities that will serve the existing and future needs of the plan area.

During FY 2011, the Chollas Triangle Master Plan Stakeholder Working Group met three times, including one community-wide workshop, to provide input and feedback on developing the draft policies and recommendations addressing water quality. It is anticipated that the draft Chollas Triangle Master Plan will be released for public review in October 2011. Following the release of the draft Master Plan, it is anticipated that the Programmatic Environmental Impact Report (EIR) for the Community Plan will be released in Spring 2012.

San Diego River Park Master Plan – The San Diego River Park Master Plan (River Park Master Plan) makes broad recommendations concerning the impacts of urban runoff and storm water quality for the San Diego River. One of the primary principles for the River Park Master Plan is to restore and maintain a healthy river system. To meet this principle, several recommendations are provided and include the following: Remove/circumvent obstacles that impede flow; remove invasive species; expand the river's recharge area; adopt programs to reduce/remove non-point source loads; and incorporate hydrology and water quality considerations in all future planning and guidance documents while monitoring water quality following implementation.

The Draft River Park Master Plan will amend the following four Community Plans: Mission Valley, Navajo, Tierrasanta and East Elliot. All four of these Community Plans will be amended to include the design guidelines from the River Park Master Plan. These design guidelines for Storm Water Management directly refer to the Storm Water Management regulations found in the Land Development Manual. During FY 2011, the draft River Park Master Plan was completed and submitted to Development Services Department to begin the city staff review of the Program EIR, the Community Plan and the Land Development Code amendments. It is anticipated that the River Park Master Plan will go out for public review in late 2011 and then to City Council for adoption in 2012.

San Ysidro Community Plan Update – A comprehensive community plan update started in San Ysidro in June of 2010 and aims to reflect current conditions, improve mobility, including the pedestrian environment, and address quality of life issues. A Community Plan Update

Stakeholder Advisory Committee (Advisory Committee) was established as part of the plan update effort in June 2010. The Advisory Committee consists of diverse representation from residents, property owners, various business interests, local community organizations and not-for-profit groups, and participating public agencies within the plan update boundary. The San Ysidro Community Planning Group, which provides City decision-makers with input and recommendations regarding land use plans and development proposals within the San Ysidro plan boundary, makes up the majority of the Advisory Committee members. In addition, this effort is informed by recent community studies and the City's 2008 General Plan which promotes current storm water, urban runoff, and water conservation policies. The Advisory Committee received presentations on the City's General Plan in August of 2010 and on the Conservation Element in February of 2011. The plan update effort for 2010 and 2011 is focused on continued outreach and collection of public comments and producing land use alternatives by the Fall of 2011. The plan will include a Conservation Element as well as a Public Facilities, Services and Safety Element, and will contain specific policies related to reducing storm water runoff in the San Ysidro Community planning area. A draft plan is likely to be available in 2012.

Uptown, Greater North Park and Greater Golden Hill Communities Plan Update ("Cluster" Update) – The Update to the Uptown, Greater North Park, and Greater Golden Hill Community Plan started in the Fall of 2009. As part of the plan update efforts for each of the three communities, recommendations concerning the reduction of urban runoff and storm water quality will be incorporated in a number of the plan elements.

During Community Plan Update Advisory Committee meetings (CPUAC) the Conservation Element of the General Plan was discussed in relation to policies regarding storm water runoff, and how these policies could be specified for each of the three communities. The implementation of policies relating to the incorporation of Green Streets, bioswales, native landscaping, and permeable surfaces, etc. was also considered. During the multi-day charrette process that was held for each of the three communities, the public was asked to identify streets in their communities as candidate "Green Streets", which would not only serve as aesthetic feature, but also as an environmental purpose for treating storm water run-off, groundwater recharge, and water filtration.

Staff is currently working on developing draft plan elements, including the Conservation Element where most of the storm water related polices would be contained. Target completion dates for each of the three plan updates has not been determined as staff is still in the process of reviewing and evaluating the input received on the plan updates.

Environmental Review Process Amendments

During FY 2011, there were no amendments to the City's environmental review process.

Development Project Approval Process Amendments

The City updated its local ordinance to incorporate the Final Hydromodification Management Plan (HMP) criteria that was adapted by the Regional Board on July 14, 2010. This was accomplished by updating the Storm Water Standards Manual and the Storm Water Requirements Applicability Checklist (Form DS-560) prior to January 14, 2011. Other minor modifications to the Storm Water Standards Manual were also completed, such as enhancements to the source control measures section, as well as re-formatting the document.

Development Project Requirements Amendments

During the reporting period the Engineering and Capital Projects Department (ECP) continued efforts to develop a City supplement to the County of San Diego's *Drainage Design Manual* and

Hydrology Manual. As part of this effort, ECP continued to coordinate with Storm Water Division staff to incorporate the new requirements associated with storm water quality protection. During the reporting period, the City continued to work with its consultant in these efforts and expects the revised Drainage Design Manual to be finalized in FY 2012.

2.2.2 Table 2-1 Items No. 2 and No. 4

The City has two departments that are responsible for ensuring that all projects undergo the development process to determine appropriate BMPs: Development Services Department (DSD) and Engineering Capital Projects (ECP).

Both ECP and DSD confirm that all projects within their purview went through the urban runoff approval process to determine the applicable project requirements. The projects (standard and priority development projects) also included the appropriate SUSMP BMPs for their priority levels. ECP and DSD track their projects and the applicable urban runoff information in proprietary databases, P6 and PTS, both of which can be downloaded to Excel for analysis.

2.2.3 Table 2-1 Items No. 7, No. 8, No. 10 and No. 13

Treatment Control BMP Inventory

A watershed-based database was implemented in 2007 to track and inventory all Treatment Control BMPs (TCBMPs) and their associated maintenance activities (see **Appendix C** for an updated Private and Public Treatment Control BMP Inventory). As a result of the inventory development and follow-up, the City has determined some inaccuracies in its recordkeeping and is continuing to attempt to resolve these issues.

The City conducted a thorough research of public and private projects that were approved between 2003 and 2007 to determine the level of Standard Urban Stormwater Mitigation Plan (SUSMP) requirements for each project. The initial inventory was developed by including all projects that had a BMP Maintenance agreement. As the inspection program progressed, it became apparent that a number of the projects included on the initial inventory are standard projects (and not PDPs) and did not require or propose treatment control BMPs. The City immediately began to investigate its TCBMP inventory in more detail to refine it, and remove those projects that did not require treatment control BMPs.

The inventory provided contains all projects with approved treatment control BMPs that can be inspected; the inventory includes 548 private development projects and 36 municipal projects. Projects that can be inspected have been visited and confirmed to have TCBMPs onsite, or have not been visited but have BMPs clearly shown on drawings. The inventory does not contain projects that have been categorized as “not-inspectable”, which are those that either: do not have BMPs shown on drawings, do not have clear drawings that can be located, or have been visited and found to not have BMPs installed. These not-inspectable projects reside in the database, but are tagged for further research or enforcement.

The inventory is updated annually by adding projects with approved TCBMPs. The Construction and Development Standards Section obtains a list of approved private projects from DSD on monthly basis and an update from ECP when a Capital Improvement Program (CIP) project completes construction.

In previous years of the program, the prioritization system developed in 2007 yielded no high priority sites. Accordingly, the City developed a revised prioritization system based on the insights gained through hundreds of inspections and numerous conversations with responsible

parties. The revised prioritization system is largely based on the type and number of BMPs present and whether the responsible party has certified that maintenance has been completed or not. The approach also includes allowances for projects to be assigned higher priorities on a case by case basis if circumstances warrant, such as if the project is believed to be a significant source of pollution related to impairments. The updated prioritization system was developed toward the end of FY 2010, finalized and implemented at the beginning of FY 2011. All high priority sites, ranked using the updated prioritization system, were inspected before Oct 1st, the start of the rainy season, consistent with the requirements of the Municipal Permit.

Private Development Treatment Control BMPs

Annual Maintenance Verifications Results (Private Development)

During the FY 2011 reporting period, 671 private projects were mailed routine annual operation and maintenance self-verification forms, with letters mandating that the responsible party to provide documentation prior to Oct 1st that demonstrated that adequate maintenance of their TCBMPs had been performed. It should be noted that the number mailed is greater than the number of inventoried projects. This apparent discrepancy exists because the mailing list used included the entire inventory of private development projects, plus several projects which were later removed from the final inventory for various reasons. These reasons include: 1) the project was found to be still in construction; 2) the project did not contain BMPs and was subject to other enforcement actions described in 2.2.6; or 3) or the project was not a Priority Development Project. Of these, 533 (79%) responsible parties provided a completed self-verification form. The following is a summary of the follow-up actions taken for the remaining 138 projects:

- 41 responsible parties indicated that construction of the development project is not yet completed. These projects were kept in the database but removed from the active inventory until it can be confirmed that the construction has been completed.
- 74 received enforcement actions, as described in Section 2.2.6.
- 23 remaining did not receive enforcement because we either confirmed that the responsible party did not receive the notice or could not confirm that the responsible party received the notice (in both cases this occurs typically due to recent change in ownership).

The 23 unresolved cases amount to about 3% of the total mailing. The City will attempt to verify mailing address for the current responsible party prior to the next annual maintenance verification mailing, but it is likely that a small percentage of these cases will occur each year because of the lag in obtaining updated information whenever there are changes to the responsible party.

Notable increases in maintenance self-verification response rates have been observed in each of the years since the program was first implemented in FY 2009 (Summer 2008). This reflects improvements in both Storm Water Division's approach and in the responsible parties' maintenance programs. Historical response rates from all three years that the self-verification mailing has been conducted are presented in Figure 2-1 below.

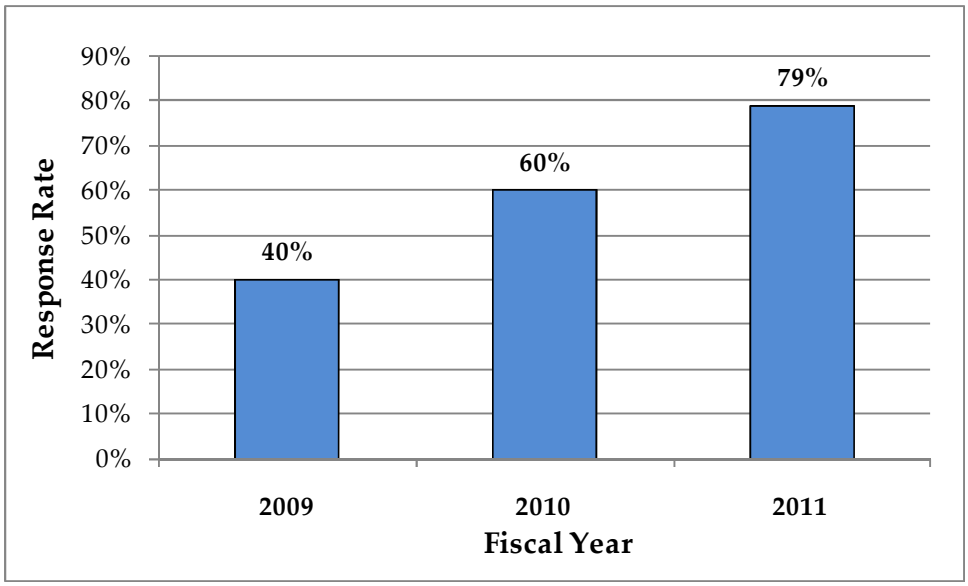

Figure 2-1: Maintenance Self-Verification Response Rates for Private Projects

Annual Verification Procedure (Private Development)

FY 2011 marked the third year that City conducted its mail-based, annual maintenance self-verification program. During the first two iterations of the program, City Staff identified the following issues as major contributors to lower-than-anticipated response rates:

- Inaccurate mailing address information;
- Responsible parties' lack of knowledge of what BMPs were located at their sites; and
- Responsible parties' inability to identify different BMP types.

In FY 2011, the City made adjustments to its procedures and mailing materials in order to continue to address these issues. Before starting the program, the City updated all property owner records in July 2010 using the most up-to-date parcel ownership data available. In order to address responsible parties' lack of ability to locate and identify BMPs at their sites, the City developed mailing materials in FY 2010 that provided general information about common BMP types, as well as site-specific information about BMP types and locations for each project. These documents were sent out again in FY 2011, but additional revisions were made to better aid responsible parties in identifying their BMPs. The mailings contained the following documents:

- A cover letter explaining the BMP inspection and maintenance self-verification program;
- BMP inspection and maintenance information sheet; and
- Database-generated maintenance self-verification form.

The BMP inspection and maintenance information sheet provides photos of BMPs and describes typical maintenance requirements for each. In FY 2011, the Storm Water Division revised the sheet so that it included additional photos of some of the most commonly installed BMPs in San Diego. Additionally, it included photos of typical access points for underground BMPs and curb inlet inserts.

The first round of mailings was sent out in early August 2010. Cover letters instructed responsible parties to complete and return the form by the end of August. If mailings were returned by the U.S. Postal Service as undeliverable, or the recipient reported that they were not the responsible party, the City's inspection consultant researched additional project contacts

and resent the mailing packet. Projects that did not respond to the first mailing were mailed a second form in September 2010. If receipt of this mailing was confirmed, and the responsible party still did not return the form, the Storm Water Division issued a Notice of Violation in November 2010. Information regarding these enforcement actions is provided in 2.2.6.

Inspections (Private Development)

Out of the 548 sites inventoried private development projects, 206 projects were inspected for TCBMPs to evaluate maintenance and operation effectiveness, which is 38 percent of the total private inventory. There were 343 total private development projects with drainage inserts inventoried in the City's database. Of these 343 sites, 166 private sites were inspected for TCBMPs to evaluate maintenance and operation effectiveness for their drainage inserts, which is 48 percent of the total private inventory. Enforcement actions for sites that showed insufficient maintenance are described in Section 2.2.6.

Municipal Treatment Control BMPs

Annual Maintenance Verifications Results (City Owned)

Maintenance verification forms were sent to all 36 municipal projects on the inspection inventory, with a written request mandating return of the completed form prior to Oct 1st. Thirty-three projects indicated that all necessary maintenance had been performed or would be performed soon. Complete information was not provided for the remaining three projects. The City is currently working with the appropriate departments to obtain all required information related to BMP maintenance at these sites.

Inspections (City Owned)

In an effort to better assess the condition of municipal BMPs, the City conducted inspections of all 36 sites on the municipal TCBMP inventory (100% of inventory). The inspections included scheduling an appointment with the responsible person so that the function of the BMPs at the site, and their maintenance requirements, could be clearly explained to each site contact. All of these routine inspections were conducted prior to the wet season. Of the 36 projects, 15 sites have at least one drainage insert, which is 42% of the total municipal inventory.

Follow-Up Inspections

25 of the 36 municipal sites were found to have maintenance deficiencies (these deficiencies were communicated to responsible city staff for each individual facility during the initial inspection described above). One project, Mission Trails Regional Park, is an open space park. Since it is a non-irrigated site, the responsible staff responded to the "Notice of Deficient Maintenance" by reporting that they were modifying the design of their bioswales to function more efficiently without irrigation. In another instance, responsible City staff responded to the notice stating that a private owner was responsible for maintenance. The City is currently investigating this case to clarify maintenance responsibility. Resolution of this pending issue will be reported in the FY 2012 JURMP Annual Report. Follow-up inspections were completed for the remaining 23 projects with maintenance deficiencies.

Follow-up inspections have resolved maintenance deficiencies at 15 of the 23 sites. For the remaining eight (8) sites with unresolved maintenance deficiencies the concern will be elevated to a higher management level. Internal memoranda will be sent to the deputy directors that oversee the divisions responsible for those facilities.

2.2.4 *Table 2-1 Item No 14*

The City has two departments that provide verification that BMPs are constructed prior to occupancy as required in the Municipal Permit, DSD and ECP. Each department has its own

method of confirming the construction of the post-construction BMPs prior to giving building occupancy. DSD has a checkbox on its project inspection forms to flag when post-construction BMPs are adequately constructed. As previously reported, private projects with Building Permit-Only are assigned to landscape inspectors to ensure that BMP construction is verified. ECP uses their standard method of inspection to ensure that what is shown and approved on the project plan set is what is constructed in the field, prior to approving the final project condition.

2.2.5 *Table 2-1 Item No. 17*

The City continued to be an active participant in the implementation of the Final HMP Plan after it was adopted by the RWQCB on July 14, 2010. City staff is an integral member of the HMP monitoring sub-workgroup, assisting the Copermittees in accomplishing HMP monitoring goals, including selection of monitoring sites and developing the Quality Assurance Project Plan (QAPP). In addition, the City led the effort in establishing the HMP Technical Sub-workgroup, and is chairing the sub-workgroup. This sub-workgroup is tackling various technical issues related to the HMP design criteria, sizing calculator and modeling requirements.

2.2.6 *Table 2-1 Item No. 21*

Seventy-four (74) private projects that did not complete and return the annual maintenance self-verification form were issued Notices of Violation by the Enforcement and Inspections Group. 52 of these provided the self-verification form as requested in the Notice of Violation. The 22 projects that failed to return the self-verification form after receiving the Notice of Violation, with the exception of one property belonging to the Post Office, were issued an Administrative Citation which included a $250 fine.

The first level of enforcement for private projects that failed a routine inspection of maintenance is the issuance of a notice of deficient maintenance. The responsible party is granted some time to correct the maintenance problem and thus avoid stronger enforcement actions. A total of 16 of these notices trailed from the end of FY 2010; all of the responsible parties have taken corrective action. A total of 108 notices of deficient maintenance have been mailed as a result of FY 2011 routine inspections. 58 of these have not yet complied and will receive further enforcement action in FY 2012; typically a Notice of Violation from the City.

Early in the reporting period the City had modified the approach to follow-up for projects that have received notices of deficient maintenance. Previously the City paid for additional "follow-up" inspections to confirm any corrective work. Now the City requires the responsible party to submit supporting documentation. This is expected to be more cost-effective yet be comparable in effectiveness. The City is still evaluating this new process.

Notice of Violation No. R9-2010-0135

On October 1, 2010, the RWQCB issued Notice of Violation No. R9-2010-0135 (NOV) to the City. The City submitted a required technical report to the RWQCB on November 30, 2010, in response to the NOV. The report included responses to all required items in the NOV as well as the City's discussion of the issues it had identified and the process changes it would implement to resolve them. The City proposed to take enforcement actions against private properties that have missing or ineffective BMPs as a corrective action. Following the submission of the technical report, DSD's Neighborhood Code Compliance Division issued Civil Penalty Notices to projects with missing and ineffective BMPs.

A total of 140 Civil Penalty Notices were issued between January and March 2011: 104 for projects with missing drainage inserts, 18 for projects with missing BMPs other than drainage

inserts, and an additional 18 for projects with ineffective BMPs. Since the issuance of the notices, Storm Water Division and DSD staff have been working with the recipients of these notices to answer questions about requirements, review & approve alternate BMPs and verify installation of missing BMPs or corrective modifications made to ineffective BMPs. While the process of receiving and verifying responses to the Civil Penalty Notices will continue into FY 2012, as of June 17, 2011, issues have been resolved and compliance has been verified for 66 cases.

2.2.7 *Table 2-1 Item No. 22*

The City performed the following notable activities during the FY 2011 reporting period:

1. Implemented an improved Threat to Water Quality (TTWQ) prioritization system. This system replaced the old prioritization procedure which did not yield any high TTWQ projects.
2. Performed a targeted municipal project inspection program. This effort involved meeting one-on-one with site representatives, and providing in-depth information about the maintenance requirements of the BMPs at their sites.
3. Planned, funded and conducted a Permanent BMP Maintenance Workshop as an outreach effort to improve the effectiveness and operation of BMP maintenance. This workshop was attended by 117 planners, engineers, municipal managers and operators.
4. Modified the plans cover sheet (D-sheet) to include standard "Storm Water Requirements" notes related to the applicable development and construction regulations. This is intended to highlight the applicable storm water requirements to ensure accurate inspection during construction.

3 CONSTRUCTION

3.1 PROGRAM IMPLEMENTATION

Table 3-1 represents the City of San Diego's FY 2011 implementation of the Construction component as it relates to the requirement of the Municipal Permit. Where reporting requirements necessitate information that is not easily tabularized, references are made in the table to locations where the information, or explanations, is located. During FY 2011, the City was compliant with all elements of Section D.2 of the Municipal Permit with the exceptions of the issues identified below.

Table 3-1: Construction Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	Confirmation that all construction sites were required to undergo the Copermittee's construction urban runoff approval process and meet the applicable construction requirements, including a description of how this information was tracked.	Confirmed – See Section 3.2.1 below for descriptions
2	Confirmation that a regularly updated construction site inventory was maintained, including a description of how the inventory was managed.	Confirmed – See Section 3.2.2 below for descriptions
3	A description of modifications made to the construction and grading ordinances and approval processes.	Changes were completed in FY 2008. No additional changes were implemented in FY 2011
4	Confirmation that the designated BMPs were implemented, or required to be implemented, for all construction sites.	Confirmed - See Section 3.2.3 below
5	Confirmation that a maximum disturbed area for grading was applied to all applicable construction sites.	Confirmed – See Section 3.2.4 below
6	A listing of all construction sites with conditions requiring advanced treatment, together with confirmation that advanced treatment was required at such construction sites.	Since the advanced treatment requirements took effect, no projects have triggered these requirements

Item No.	Program Implementation Description	Confirmation and/or result
7	For each construction site within each priority category (high, medium, and low), identification of the period of time (weeks) the site was active within the rainy season, the number of inspections conducted during the rainy season, and the number of inspections conducted during the dry season, and the total number of inspections conducted for all sites.	See Appendices D and E*
8	A description of the general results of the inspections.	See Section 3.2.5 below for description
9	Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.	Confirmed – See Sections 3.2.5 and 3.2.6 below for additional information
10	The number of violations and enforcement actions (including types) taken for construction sites, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.	See Section 3.2.6 below
11	A description of notable activities conducted to manage urban runoff from construction sites	See Section 3.2.7 below

*Appendix E is based upon the database used to track DSD-IS inspections which currently does not have the ability to accurately provide the number of weeks a project was active during the rainy season. See Section 3.2.5 below for more detailed information.

3.2 DISCUSSION SUPPORTING TABLE 3-1

3.2.1 Table 3-1 Item No. 1

There are two departments responsible for implementing the construction urban runoff approval processes: ECP is responsible for planning, design and construction of all of the City's CIP projects; DSD is responsible for reviewing construction and development projects for private development in the City.

During FY 2011 ECP confirms that all ECP project managers of CIP projects were required to incorporate the construction requirements set forth in the *Storm Water Standards Manual*. The requirements are incorporated into the project specifications and plans prior to approval in order to fund the construction of the project. ECP tracks their projects using an internal database, P6 which can be exported to Excel tables.

Standard drawings were also used in conjunction with project specific drawings where appropriate. Drawings were routed internally (within the design sections) as a "peer plan check" to ensure adequate inclusion of construction BMP measures.

Private projects were reviewed by DSD staff to ensure conformance to Chapter IV of the *Storm Water Standards Manual* prior to issuance of any construction permits. During FY 2011 DSD confirms that all applicable projects were required to incorporate construction BMPs on the project plans. DSD utilizes Project Tracking System (PTS) to track projects within their system.

3.2.2 Table 3-1 Item No. 2

During the reporting period, both ECP Field Engineering and DSD Inspection Services confirm that a regularly updated construction site inventory was maintained.

Field Engineering used a combination of a paper inventory and a Storm Water tracking database developed during previous reporting periods. Field Engineering began using the database in October 2010.

DSD maintained an inventory of construction permits in Project Tracking System (PTS). The system was updated as new permits were issued or closed out. The building inspectors also provided updates to this inventory based on site inspections.

3.2.3 Table 3-1 Item No. 4

The City confirms that all construction sites, both private and public, were required to implement temporary construction BMPs, with the exception of thirteen (13) Public Utilities Department Water Branch projects. The projects were Water Main Break projects and are listed in Table 3-2 below. Water main breaks are emergencies where BMPs may not be accessible or warranted.

Table 3-2: Construction Projects Where BMPs Were Not Required

Project Number/Name	Project Number/Name
343 Woodmant St. WMB	4666 Mission Ave. WMB
East J St/Paso Del Rey WMB	6363 Greenwich Dr. WMB
Quince St. WMB	14779 Black Mtn. Rd. WMB
Morley Field WMB	Georgia/Cypress WMB
Conestoga Way/Ct. WMB	Hornblend and Bayard Alley WMB
6800 Wunderlin Ave. WMB	Kettner and Broadway WMB
1010 Edgemont Pl. WMB	

3.2.4 Table 3-1 Item No. 5

ECP Field Engineering confirms that the City's grading limitation requirements were applied to all applicable projects during the rainy season. Under the City's grading limitation, project applicants have an option of Phased Grading not to exceed five (5) acres of active grading at one time or implementation of additional BMPs. If a project applicant/contactor elects to grade more than five acres at one time, a Weather Triggered Action Plan (WTAP) along with BMP Implementation Plan (BIP) are required.

The City inspectors consistently inspected project sites for compliance with the grading limitations; however they continue to face challenges with contractors adhering to the requirement. The City has been diligently working with the construction industry to improve knowledge level through conducting education seminars and presentations on the City's requirements.

3.2.5 Table 3-1 Item No. 8

3.2.5.1 Field Engineering

Construction sites are required to be inspected based on the frequency schedule set forth in the City's 2008 JURMP. In general, the Resident Engineers (REs) inspected and issued Storm Water Notices as-needed in the dry season, and at least bi-weekly in the rainy season for high priority projects. Medium projects are inspected monthly during the rainy season and as-needed during the dry season. Low priority projects are inspected on an as-needed basis during both the rainy and dry seasons. A copy of the Storm Water Notice is provided to the contractor and one is filed with the project.

Appendix D lists all of the construction projects active during the reporting period and the following corresponding information on a project by project basis:

- City Work Order Number
- Project Location
- Storm Water Priority (Inspection Frequency)
- # of weeks active in the Rainy Season
- # of inspections in Rainy Season
- # inspections in Dry Season
- Total # of inspections for the site during the reporting period

During FY 2011, 212 Field Engineering construction sites were in the active construction phase: 36 high priority sites; 31 medium priority sites; and, 145 low priority sites. In total, the Field

Engineering Division conducted 1,567 documented storm water inspections throughout the reporting period.

The following is a summary table of the number of high, medium and low priority projects and the inspections conducted at each type.

Table 3-3: FY 2011 ECP Field Construction Inspection Summary

Inspection Item	No. of Sites
High Priority Sites Receiving Required No. of Inspections	29 of 36
Medium Priority Sites Receiving Required No. of Inspections	28 of 31
Low Priority Sites Receiving Required No. of Inspections	145 of 145

During FY 2011, some construction sites did not receive the correct number of inspections. In order to address this issue, ECP-Field will emphasize to all inspectors during the annual rainy season storm water pollution prevention training the importance of filing BMP inspection reports in a timely manner that complies with the minimum inspection frequencies. Inspectors will also be reminded that BMP inspection reports for high priority projects should not exceed two week intervals (not just twice a month) and BMP inspection reports for medium projects should not exceed 4-5 week intervals (not just twice every two months). In addition some tracking database changes have been implemented that will also assist inspectors with ensuring inspections are conducted.

In addition to the training described above, ECP-Field has also made revisions to its recently implemented database. During FY 2011, a Storm Water Pollution Prevention (SWPP) database was used for the first time to track ECP-Field construction inspections. Through the use of the database during FY 2011, some areas for database enhancement were identified. Furthermore, Key Performance Indicators (KPIs) have been installed into the database and the KPIs enable the database user to quickly identify any projects that are behind schedule for inspections. Inspectors are becoming more familiar with the database and the protocol for filing the BMP inspection reports. Through the proper implementation of the database and filing of inspection reports along with any additional training and coordination with the Transportation & Storm Water Department, ECP-Field expects to have all construction sites receive the correct number of inspections in FY 2012.

In general, the FY 2011 inspections resulted in compliant construction sites. Due to the size of the City and the number of projects that are on-going in any given year, inspection results are widely variable. Common corrections needed after review by the City include:

- Maintaining Construction Exit/Entrances
- Dust Control
- Inadequate or poorly maintained silt fence
- Inadequate or poorly maintained erosion control

In order to ensure that all required inspection steps were performed to review for compliance, the City used a standardized process for all inspections. If compliance was not observed, enforcement actions ensued. As required by the JURMP, all inspections at a minimum included:

1. A check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;

2. Assessment of compliance with the Construction Storm Water BMP Performance Standards located in Chapter IV of the *Storm Water Standards Manual* (and enforceable by San Diego Storm Water Management and Discharge Control Ordinance ("Storm Water Ordinance") Section 43.04, et seq.);
3. Assessment of BMP effectiveness;
4. Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
5. Education and outreach on storm water pollution prevention, as needed; and
6. Creation of a written inspection report.

3.2.5.2 Inspection Services

Building Inspectors in DSD's Inspection Services Division inspect construction BMPs associated with projects performing construction under building permits. The Inspection Services Division of DSD inspects building sites routinely for compliance with storm water requirements. Each inspector routinely monitors his/her district on a daily basis. Sites are also inspected at the request of another department or in response to complaints. The Inspection Services Division utilizes a special Storm Water Correction Notice that is issued when corrections pertaining to storm water pollution prevention are needed to notify the contractor/owner that improvements must be made immediately. For more egregious or repeat issues, inspectors have been trained to issue re-inspection notices, which effectively stops work on the site until the corrections are made and the site is re-inspected. If the owner/contractor fails to comply with a Storm Water Correction Notice issued for their site, Inspection Services staff forwards the notice to the Storm Water Department or Neighborhood Code Compliance for further action.

During FY 2011, 15,545 building permits were active. (i.e., issued and/or with an open permit that has not been finalized). In total, including Building, Electrical, Plumbing and Mechanical Permits, the Inspection Services Division conducted 32,633 wet weather inspections and 26,114 dry weather inspections for a total of 58,747 inspections throughout the reporting period.

During the reporting period DSD continued to have a reporting issue with their Project Tracking System (PTS); the active period is established by the date the permit was issued rather than actual start of construction. Staff cannot determine the actual start of construction since a lapse of time may exist from ground breaking to when the first inspection is scheduled. Once inspections have begun, PTS tracks each inspection and automatically schedules a Storm Water Inspection as required by the Storm Water Priority Tag assigned to the permit. To improve upon this, DSD-IS intends to change the tracking method of construction activity for activated projects by recording the first inspection ate instead of the date the permit was issued. This will more accurately reflect the actual construction activity during the FY 2012 reporting period.

Appendix E lists all of the building permit construction projects active during the reporting period and the following corresponding information on a project by project basis:

- City Permit Number
- Project Title
- Inspection Frequency Priority (where applicable)
- # of weeks active in the Rainy Season (active means the permit is open, not necessarily that construction activities were occurring)
- # of inspections in Rainy Season
- # inspections in Dry Season
- Total # of inspections for the site during the reporting period

DSD Inspection Services confirms that inspection frequencies were met with respect to inspections performed by DSD-IS at all 117 of its high priority sites and 249 of its 251 medium priority projects. One of the medium priority projects that was not inspected at the proper frequency missed one inspection due to the winter holidays. The other medium project was not inspected at the proper frequency because an error entered in the database system by a temporary inspector caused a delay in prompting the next scheduled Storm Water Inspection.

Most of the permits that are still active were initiated prior to the City assigning a priority to projects. The City has performed storm water inspections at these sites based on the frequency prescribed by the Storm Water priority assigned to the project, as well as on a normal callout basis – i.e., when a regular building inspection is called for, the inspector performs a storm water inspection as well as the trade (plumbing, electrical, etc.) inspection. As described above, PTS could not accurately track the number of weeks each project was active during the rainy season. Therefore, Appendix E is not an accurate reflection of the actual number of weeks each project was active during the rainy season, but rather, the results of current form of the PTS database.

3.2.5.3 Public Utilities Department Wastewater Branch

The Public Utilities Department Wastewater Branch conducts construction inspections of its capital improvement projects. During the reporting period, Public Utilities Department Wastewater Branch had 17 active low priority projects. Table 3-4 below, provides a summary of Public Utilities Department Wastewater Branch's construction projects:

Table 3-4: Public Utilities Department Wastewater Branch FY 2011 Construction Project Summary

Project Number/Name	Inspection Priority	# of weeks active during the rainy season	# of inspections during the rainy season	# of inspections during the dry season
Siempra Viva Pipe Replacement	Low	5	4	1
Imperial & Francis Pipe Repair	Low	None	N/A	2
Rose Creek Emergency I	Low	8	3	None
Rose Creek Emergency II	Low	4	2	None
Dove Canyon Emergency	Low	2	3	None
33rd & Maple Pipe Repair	Low	6	5	None
San Clemente Emergency	Low	8	9	None
1830 Upas Pipe Repair	Low	2	5	None
Adobe Falls Emergency	Low	1	2	None
Tecolote MH 159 Emergency	Low	3	6	None
Rose Canyon New Manhole	Low	4	2	1
Pershing and 26th Emergency	Low	1	1	None
32nd and Palm Pipe Repair	Low	1	1	None
Euclid and Menlo Emergency	Low	None	N/A	2
1621 Hotel Circle South Emergency	Low	None	N/A	7
Dwane and Elaine Emergency	Low	None	N/A	1
Central Tecolote Mitigation Project	Low	12	10	None

3.2.5.4 Public Utilities Department Water Branch

The Public Utilities Department Water Branch conducts construction inspections of its capital improvement projects. During the reporting period, Public Utilities Department Water Branch had 21 active low priority projects. Table 3-5 provides a summary of Public Utilities Department Water Branch's construction projects:

Table 3-5: Public Utilities Department Water Branch FY 2011 Construction Project Summary

Project Number/Name	Inspection Priority	# of weeks active during the rainy season	# of inspections during the rainy season	# of inspections during the dry season
Santa Fe Water Main Break (WMB)	Low	None	N/A	1
343 Woodmant St. WMB	Low	None	N/A	1
6692 Plaza Ridge Rd. WMB	Low	16	10	1
East J St/Paso Del Rey WMB	Low	1	1	N/A
Quince St. WMB	Low	1	2	N/A
Morley Field WMB	Low	1	1	N/A
Conestoga Way/Ct. WMB	Low	1	1	N/A
Morena/Jutland WMB	Low	4	5	N/A
6800 Wunderlin Ave. WMB	Low	None	N/A	1
1010 Edgemont Pl. WMB	Low	None	N/A	1
2711 Carmel Valley Rd. WMB	Low	2	8	N/A
4666 Mission Ave. WMB	Low	None	N/A	1
6363 Greenwich Dr. WMB	Low	None	N/A	1
10675 Sorrento Valley Rd. WMB	Low	1	N/A	N/A
14779 Black Mtn. Rd. WMB	Low	None	N/A	1
Fuchsia Ln/I-805 WMB	Low	1	1	1
Georgia/Cypress WMB	Low	None	N/A	4
Hornblend and Bayard Alley WMB	Low	None	N/A	1
Kettner and Broadway WMB	Low	None	N/A	1
Lexington and 39th WMB	Low	None	N/A	6
Lake Murray Storm Water Repair	Low	None	N/A	18

3.2.6 Table 3-1 Item No. 10

Several departments conduct their own construction inspection and enforcement for construction projects that are managed by their departments. These departments include:

1) Engineering Capital Projects – Field Engineering Division
2) Development Services Department – Inspection Services Division
3) Public Utilities Department – Wastewater Branch
4) Public Utilities Department – Water Branch

Departmental inspection staff coordinates corrective actions and other enforcement directly with the responsible parties (e.g., contractors, owners, etc.). Table 3-6 below, provides a summary of the corrective notices and notices of violations issued by the inspection staff through their regular and follow-up inspections.

Table 3-6: FY 2011 Corrective Actions Summary by Department

Department Conducting Inspections	Number of Corrective Notices Issued
ECP – Field Engineering Division	403
DSD – Inspection Services Division	167
Public Utilities Department Wastewater Branch	2
Public Utilities Department Water Branch	4

In FY 2011, one stop work order was issued by the Field Engineering Division and 18 were issued by Inspection Services Division at construction sites. The stop work orders are listed in the following table.

Table 3-7: FY 2011 Stop Work Notices

Department Conducting Inspections	Project Title	Number of Stop Work Notices Issued
ECP – Field Engineering Division	Pacific Highlands Ranch, Unit 21 & 22	1
DSD – Inspection Services Division	Plum Residence	3
DSD – Inspection Services Division	Kawa Residence	2
DSD – Inspection Services Division	Wu SFD Rebuild	2
DSD – Inspection Services Division	Bridle Ridge-Phase 2	1
DSD – Inspection Services Division	Sauvage Residence	1
DSD – Inspection Services Division	Pennington Residence	1
DSD – Inspection Services Division	Townspeople 34th St. Apts	1
DSD – Inspection Services Division	1037 15th St Move Off	1
DSD – Inspection Services Division	Hance Retaining Wall	1
DSD – Inspection Services Division	Carriage Run 9-22	1
DSD – Inspection Services Division	6610 Three Canyons Court	1
DSD – Inspection Services Division	Cohen New SFD	1
DSD – Inspection Services Division	Jones Deck Repair	1
DSD – Inspection Services Division	Saffian Remodel & Addition	1

In addition to the enforcement actions taken by the departmental inspection staff, the Storm Water Division conducts investigations and enforcement at construction sites. The Storm Water Division operates a hotline as well as other means of communication (e.g., website, main office line, and fax) to encourage the reporting of illegal discharges to the storm water conveyance system from locations within the City, including construction sites. Twenty-one (21) investigations were conducted at construction sites in FY 2011. As a result of the investigations conducted, the enforcement actions summarized in **Table 3-8** were taken. Investigations where no responsible party could be identified after a thorough investigation resulted in a "no action taken" classification and the discharge was abated and if necessary cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations where an enforcement action was taken.

Table 3-8: FY 2011 Code Compliance Enforcement Actions for Sites of Construction Activities

Type of Enforcement Action	Number of Actions
Administrative Citation	5
Education	4
Found to be Exempt	0
Letter	0
No Action Taken	4
No Evidence Found	1
Notice of Violation	5
Referred to another Department	2
To be Determined	0
Total	**21**

As a result of the twenty-one (21) investigations, the Storm Water Department's Enforcement and Inspections Group conducted fifteen (15) follow-up activities, and compliance was achieved at all twenty-one (21) construction sites or activities in FY 2011.

3.2.7 Table 3-1 Item No. 11

During the reporting period, ECP-Field initiated the use of its database designed specifically to track storm water issues. The database tracks projects and inspection results to ease reporting of the thousands of inspections the division conducts annually.

4 MUNICIPAL

4.1 PROGRAM IMPLEMENTATION

Table 4-1 represents the City of San Diego's implementation of the Municipal component as it relates to the Municipal Permit requirements during FY 2011. For any items in the table where an explanation, description, results, inventory, or examples are necessary, references are noted in the table, and are included as an Appendix, or are provided in Section 4.2. During FY 2011, the City was compliant with all elements of Section D.3.a. of the Municipal Permit with the exceptions of the specific issues identified below.

Table 4-1: Municipal Program Implementation

Item No.	Program Implementation Description	Confirmation and/or Result
1	Any updates to the municipal inventory and prioritization.	See Appendix G for inventory update
2	Confirmation that the designated BMPs were implemented, or required to be implemented, for municipal areas and activities, as well as special events.	Confirmed. BMPs were required to be implemented per the JURMP Section 6.3.3.1.1, 6.3.3.1.2 and Sections 6.X.3.1.1 and 6.X.3.1.2 for each Department or Division.
3	A description of inspections and maintenance conducted for municipal treatment controls.	See Section 4.2.1 below
4	Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.	Inventory =33,833 (See Section 4.2.2 below)
		Inspected =38,361 (some inspected more than once)
		Catch basins found with accumulated waste exceeding cleaning criteria = 16,293
		Catch Basins/Inlets Cleaned =16,753 (See Section 4.2.2 below)
5	Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.	Total Distance of MS4=1,245 miles
		Distance of MS4 inspected = 2.64 miles, at a minimum (The distance is most likely higher. However, due to variability of the distance visually inspected at each cleanout/inlet, the total distance is not formally tracked)
		Distance of MS4 found with accumulated waste = 2.64 miles
		Distance of MS4 Cleaned = 2.64 miles

Item No.	Program Implementation Description	Confirmation and/or Result
6	Identification of the total distance (miles) of open channels, the distance of open channels inspected, the distance of open channels found with anthropogenic litter, and the distance of open channels cleaned.	Open Channels = 39 miles
		Inspected = 39 miles
		Distance found with anthropogenic litter = 1.93 miles
		Cleaned = 1.93 miles
7	Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.	Catch Basins/Inlets and MS4 = 13,146 tons
		Open Channels = 19,374 tons (includes sediment). Also 20,183 tons debris (includes sediment) removed from Tijuana River/Smugglers Gulch channels during emergency operations
8	Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.	None identified at this time.
9	Confirmation that the designated BMPs for pesticides, herbicides, and fertilizers were implemented, or required to be implemented, for municipal areas and activities.	Confirmed. BMPs were required per the JURMP Section 6.3.3.1.2 and Sections 6.X.3.1.2, for each Department/Division
10	Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.	1,384 curb-miles swept weekly
11	Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.	313 curb-miles swept monthly
12	Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.	3,540 curb-miles swept every other month

Item No.	Program Implementation Description	Confirmation and/or Result
13	Identification of the total distance of curb-miles swept.	87,413 miles
14	Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.	Total Parking Lots =450
		Sweeping frequency = 1x per year (operation yards swept 1x per month)
		Parking Lots Swept = 450
15	Amount of material (tons) collected from street and parking lot sweeping.	5,630 tons
16	A description of efforts implemented to prevent and eliminate infiltration from the sanitary sewer to the MS4	See Section 4.2.3 below
17	Identification of the number of sites requiring inspections, the number of sites inspected, and the frequency of the inspections.	Sites requiring inspections = 789
		Sites inspected 2x per year =782 (See Section 4.2.4 below for explanation)
		Frequency of inspections = 2x per year
18	A description of the general results of the inspections.	See Section 4.2.4 below
19	Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.	Confirmed. Inspections implemented in accordance with the JURMP Sections 6.X.4.1 for each Department/Division
20	The number of violations and enforcement actions (including types) taken for municipal areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.	See Section 4.2.5 below
21	A description of any efforts conducted to reduce pollutant discharges from non-emergency fire-fighting flows.	See Section 4.2.6 below
22	A description of notable activities conducted to manage urban runoff from municipal areas and activities	See Section 4.2.7 below

4.2 DISCUSSION SUPPORTING TABLE 4-1

4.2.1 Table 4-1 Item No. 3

The City's municipal Treatment Control BMP (TCBMP) inventory includes 36 constructed projects (**Appendix C**). The City department responsible for the maintenance of each municipal TCBMP performs inspections and cleanings of these BMPs on a routine basis. Please refer to Section 2.2.3 for more information on the inspection and maintenance of municipal TCBMPs.

4.2.2 Table 4-1 Item No. 4

The City has over 30,000 inlets and catch basins that are maintained by the Storm Water Division's Operation and Maintenance Group. The Operation and Maintenance Group began the process of updating the catch basin and inlet inventory during last fiscal year. As a result of the inventory update, newly added catch basins and inlets are scheduled for inspection and any necessary cleaning during FY 2012.

In addition to the City's Storm Water Division's Operation and Maintenance Group maintenance of inlets and catch basins, City Departments or Divisions that operate and maintain buildings are also responsible for inspecting and cleaning all associated storm drain facilities (approximately 1,998) as noted in Table 6.3.2 of the City's JURMP. During FY 2011, the Public Utilities Department's Water Branch did not conduct cleaning of their catch basins (106) due to a misunderstanding of the inspection and cleaning requirements. The Water Branch conducted catch basin and inlet cleaning in November 2009 and believed that cleaning was to be conducted on a biennial basis. However, the Water Branch inspects and cleans the top of the storm drain catch basins during the semi-annual storm water inspections and on an as-needed basis. An outside contractor will be hired every fiscal year to clean the catch basins. The Storm Water Division is currently working with the Water Branch to resolve this issue for future reporting periods.

4.2.3 Table 4-1 Item No. 16

The Public Utilities Department, Wastewater Branch currently maintains over 3,000 miles of City sewer main line with over 250,000 service connections. During FY 2011, the department conducted field inspections and televised sewer lines, which can reveal blockages from debris to roots to grease and show pipeline cracks, breaks, or deterioration. Through proactive maintenance, spills or leaks to the storm drain system were minimized.

In FY 2011, the Wastewater Branch reduced the number of sewer spills, and helped to protect storm water quality by inspecting or televising 124 miles, repairing or performing maintenance on 34 miles, and cleaning 1,966 miles of sewer lines. These efforts helped to prevent and eliminate sewer spills and the potential for sewer infiltration to the storm drain system in FY 2011. Further discussion on sewer spills will be included in the City's Illicit Discharge Detection and Elimination Section which will be submitted by December 15, 2011.

The Wastewater Branch also continues to implement the Grease Disposal Program to prevent sewer line blockages and resulting spills caused by the disposal of grease into the sewer system. The program aims to educate residents and businesses on the proper disposal alternative for fats, oils and grease.

4.2.4 Table 4-1 Item No. 18

Municipal Facility Inspections

During FY 2011, the City of San Diego conducted a total of 1,571 inspections of municipal facilities. Out of the 789 facilities 782 facilities were inspected two times during the reporting period. For the 7 facilities that did not have 2 inspections, there were five facilities where the pre-rainy season inspections were not conducted. This was a result of time constraints and during FY 2012 the Public Utilities Department, Water Branch will begin the pre-rainy season inspections in early or mid-August to allow more time for the inspections in order to correct this issue. The other 2 facilities only received one inspection because they are new Park and Recreation facilities that were not open before the rainy season. The City has a significant inventory of municipal facilities, and, through the efforts of dedicated staff, over 99% of the inventory received the required number of inspections during FY 2011.

In addition to the steps individual departments are taking to ensure that inspections are conducted in accordance with the City's JURMP, the Storm Water Division also sent out a memorandum to all departments in September 2010 reminding staff of the inspection requirements for municipal facilities. The Storm Water Division plans to send out this memorandum annually. The Storm Water Division will also meet with the Department's Storm Water liaisons twice a year and specifically discuss this issue, among others.

The majority of municipal facilities inspected during FY 2011 did not have any storm water issues. The facilities where issues were noted typically included missing trash can lids due to theft, broken sprinkler heads, overgrown landscape, vegetation on ground, and catch basins needing cleaning. These issues were followed-up and corrected by replacing trash can lids where applicable, repairing sprinkler heads, trimming landscape, removing vegetation on the ground, and cleaning catch basins. Inspection forms are available upon request.

Special Event Inspections

During FY 2011, the Office of Special Events issued 346 City-wide special event permits for a total of 700 event dates and required Special Event BMPs to be implemented at special events, as applicable. The Office of Special Events inspected the San Diego Crew Classic located at Crown Point Shores Park, and no deficiencies were noted during the inspection. The inspection form is on file at the City and can be provided upon request.

During FY 2011, the Park and Recreation Department issued 5,814 special event permits and required Special Event BMPs to be implemented at Special Events, as applicable. In accordance with the City's JURMP the Park and Recreation Department conducted inspections of two special events: Walk to D'Feet in De Anza Cove and the Dodge Rock-n-Roll Marathon at Fiesta Island. There were no deficiencies noted during the inspections, and the inspection forms are available upon request. In addition to the required inspections by the City's JURMP, it is also the Park and Recreation Department's practice to inspect every site at the conclusion of the special event.

During FY 2011, the Public Utilities Department, Water Operations Branch issued three (3) special event permits and conducted inspections of all three (3) special events. The Water Operations Branch required Special Event BMPs to be implemented at special events, as applicable, during FY 2011. There were no deficiencies noted during the inspections and all of the inspection forms are available upon request.

Qualcomm Stadium issued 125 special event permits during FY 2011 and inspected one of the special events. Implementation of all applicable Special event BMPs were required at all special events during FY 2011 and there were no deficiencies noted during the inspection. Inspection forms are available upon request.

In summary, over 5,000 events were permitted by the City during the reporting period. Special event inspections yielded no identified deficiencies.

4.2.5 Table 4-1 Item No. 20

In FY 2011, Storm Water Division Code Compliance Officers conducted 247 investigations of potential discharges associated with municipal facilities or activities (**Appendix F**). This total is representative of all investigations on Municipal land uses including municipal facilities, parks, parking lots, and rights-of-way regardless of who generates the discharge. As a result of the investigations conducted by the Storm Water Division Enforcement and Inspections Group, the following enforcement actions were taken as show in **Table 4-2**.

Table 4-2: FY 2011 Municipal Facilities and Activities Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Administrative Citation	14
Education	13
Found to be Exempt	8
Letter	4
No Action Taken	128
No Evidence Found	22
Notice of Violation	39
Pending[1]	11
Referred to another Department	8
Total	**247**

Investigations where no responsible party could be identified after a thorough investigation were classified as "no action taken" resolutions. These discharges, created by unidentified parties, were most often abated and cleaned up by the City. Furthermore, code enforcement staff provided educational materials for all investigations except when no action was taken or no evidence was found.

As a result of the 247 investigations, the Storm Water Division Enforcement and Inspections Group conducted 134 follow-up activities, and compliance was achieved at 236 of the 247 investigations of municipal facilities and activities during FY 2011. There are 11 investigations still in progress at the time of this report. The resolution of these investigations will be included in the FY 2012 JURMP Annual Report.

4.2.6 Table 4-1 Item No. 21

During FY 2011 the Fire-Rescue Department implemented the City's 10 minimum BMPs and BMPs for pesticide and fertilizers department-wide as detailed in Section 6.6.3.1.1 of the 2008 JURMP. In addition the Fire-Rescue Department was proactive in conducting training of 941

[1] Pending enforcement actions will be reported in the FY 2012 JURMP Annual Report

staff members in regards to vehicle washing, hazardous waste storage areas, hazardous materials storage areas, storm drain inspection and cleaning, landscaping activities, and parking lot maintenance. During FY 2011, the Fire Department also ensured that the wash water from fire equipment, etc. was directed toward bioswales or landscaped areas when applicable and practical. Additionally, the Fire-Rescue Department installed custom debris filters at the storm drain grates to capture larger size debris at three (3) Fire Department facilities.

4.2.7 Table 4-1 Item No. 22

Several departments conducted activities above and beyond permit requirements during the reporting period. These additional activities are summarized below.

- In addition to parking lot and storm drain cleaning, the Park and Recreation Department collected 25,550 tons of debris from the parks, beaches, and bay, including collecting 196 tons of debris as a result of the 2010 July 4th holiday.
- Qualcomm Stadium, Park and Recreation Department, and the Public Utilities Department, Water Operations Branch conducted more inspections of Special Events than was required by the City's JURMP. The Park and Recreation Department inspected every Special Event site at the conclusion of the event which resulted in the inspection of 5,814 sites.
- The Storm Water Division conducted 2.5 times per week, twice per week, and weekly sweeping of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris and also conducted sweeping every other month of the improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris. These sweeping frequencies are above and beyond what is required by the Municipal Permit.
- The Storm Water Division conducted emergency maintenance activities to restore flood control facilities in the Tijuana River Valley during the 2010-2011 rainy season to reduce the chance of flooding that threaten surrounding life and properties. Specifically the project included the excavation of Smuggler's Gulch and Pilot Channel of the Tijuana River Valley to facilitate flows within these channels and prevent flooding. As noted above, 20,183 tons of trash and debris were removed.
- On May 18, 2011 Mayor Jerry Sanders' office and the Environmental Services Division announced a series of administrative regulations to limit the City's purchase of single-use plastic water bottles and plastic foam products (often inappropriately referred to as Styrofoam™). The new guidelines will be effective on January 1, 2012 and will reduce the City's environmental impacts, potentially save money, reinforce confidence in the City's municipal water system and set a precedent for other cities in the region. Specifically but not inclusively, the Mayor's administrative regulation will:
    - Prohibit the purchase of single-use water bottles and water bottle dispensers with City funds, with the exception of facilities that do not have access to safe tap water to drink
    - Prohibit the purchase of plastic foam food service ware with City funds (referred to as expanded polystyrene, or EPS)
    - Develop standard language for bids that expresses the City's commitment to eliminating plastic foam in packing materials, using alternative recyclable packing materials when available and/or vendor take back of the packing materials. This includes working with current vendors to reduce plastic foam use.
    - Revise City permit applications; including those for special events, parks and recreation facilities, and water reservoirs and lakes, to prohibit the use of plastic food service ware.

The City of San Diego joins 48 California cities that have already committed to reducing plastic foam for environmental reasons and 28 jurisdictions that have limited bottled water purchases to reduce expenses and support public water systems.

5 INDUSTRIAL AND COMMERCIAL

5.1 PROGRAM IMPLEMENTATION

Table 5-1 represents the City of San Diego's implementation of the Industrial and Commercial component as it relates to the Municipal Permit requirements during the FY 2011 reporting period. For any items in the table where an explanation, description, results, inventory, or examples are necessary, references are noted in the table, and are included as an Appendix or are provided in Section 5.2. During FY 2011, the City was compliant with all elements of Section D.3.b. of the Municipal Permit with the exception of the items noted below.

Table 5-1: Industrial and Commercial Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	Any updates to the industrial and commercial inventory.	See Appendices H and I for inventory update
2	Confirmation that the designated BMPs were implemented, or required to be implemented, for industrial and commercial sites/sources.	Confirmed per the City's JURMP Appendix X. Designated BMPs were required to be implemented at industrial and commercial sites.
3	A description of efforts taken to notify owners/operators of industrial and commercial sites/sources of BMP requirements, including mobile businesses.	See Section 5.2.1 below for description
4	Identification of the total number of industrial and commercial sites/sources inventoried and the total number inspected.	Inventoried: 24,395 (18,574 stationary facilities and 5,821 mobile) Inspected: 6,300 facilities (See Appendices J and K)
5	Justification and rationale for why the industrial and commercial sites/sources inspected were chosen for inspection.	See Section 5.2.2 below
6	Confirmation that all inspections conducted addressed all the required inspection steps to determine full compliance.	Confirmed per the City's JURMP Section 7.2.4. See Section 5.2.3 below for description.

Item No.	Program Implementation Description	Confirmation and/or result
7	At a minimum, 100% of all sites (excluding mobile sources) determined to pose a high threat to water quality (TTWQ) shall be inspected.	100% (768 sites) of all inventoried stationary sites determined to pose a high TTWQ were inspected[2].
8	At a minimum, 25% of the sites inventoried as required in section D.3.b.(1) of the Permit (excluding mobile businesses) shall be inspected.	Approximately 34% of the City's commercial and industrial inventory received site visits and/or inspections[3]. See Section 5.2.4 below for details.
9	Identification of the number of third party inspections conducted.	None
10	Identification of efforts conducted to verify third party inspection effectiveness.	None
11	A description of efforts implemented to address mobile businesses.	See 5.2.5 below for description
12	The number of violations and enforcement actions (including types) taken for industrial and commercial sites/sources, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.	See 5.2.6 below for discussion
13	A description of steps taken to identify non-filers and a list of non-filers (under the General Industrial Permit) identified by the Copermittees.	Followed steps described in JURMP Section 7.2.4.6. See Appendix L for list of non-filers
14	A description of notable activities conducted to manage urban runoff from industrial and commercial sites/sources	See 5.2.7 below for description

[2] The Storm Water Division conducted watershed-focused inspections during FY 2011 as part of the watershed program efforts. The watershed inspections conducted at high TTWQ sites in FY 2011 were used to address the requirement of inspecting all high TTWQ sites. Additional site visits to these locations within the same year were not conducted for program efficiency. The same inspection form as the routine industrial/commercial program was utilized.
[3] The watershed-focused inspections were *not* included in determining the percentage of inventoried facilities that received inspections

5.2 DISCUSSION SUPPORTING TABLE 5-1

5.2.1 Table 5-1 Item No. 3

Notification letters were sent to all stationary businesses on the City's inventory that had not yet been inspected within the current Permit cycle as of the date of the initial mailing in March 2011. The letters that were sent included educational information about the City's industrial/commercial program, including BMP requirements. The mailing materials also included a response form that businesses could send back to update contact information and/or operational status (e.g., moved to another City, no longer in business, etc.). Response letters were still being received as of the end of the reporting period, and the responses will be used to update the City's inventory in early FY 2012.

While many businesses received general Think Blue and pollution prevention information, as noted in Section 8.2.1 of this report, mobile businesses did not receive notification of applicable BMP requirements. The Storm Water Division is currently working on including additional BMP information specific to mobile businesses that will be distributed in FY 2012 through a business mailing process or other method.

5.2.2 Table 5-1 Item No. 5

Prior to the start of the Storm Water Division's FY 2011 inspections, the City's inventory was prioritized according to a process consistent with the requirements for the Municipal Permit. During FY 2011 all high threat to water quality (TTWQ) industrial and commercial businesses were selected for inspection. Additional sites selected for inspection were predominantly businesses that were newly added to the City's inventory that had not yet received an inspection, or medium TTWQ sites that had not been inspected recently. These businesses were mainly selected from business categories identified as potential problems such as auto repair shops, auto paint and body shops, building material suppliers, contractors deemed likely to have storage yards, and trucking or other transportation operations.

5.2.3 Table 5-1 Item No. 6

All inspections conducted during FY 2011 addressed the required inspection steps to determine full compliance by utilizing the City's standard industrial/commercial inspection form, which was designed to mirror the City's minimum BMP requirements. In addition to the inspection form an industrial attachment and a restaurant attachment were used where applicable to collect information on Industrial Permit compliance status and restaurant management. An inspection form was completed at all sites that received a full inspection.

BMPs were required to be implemented at all industrial and commercial sites; and if BMPs were not implemented at facilities where inspections were conducted, then facility personnel were notified both verbally and by mail. Every business that received a full inspection was provided with inspection results by mail in the form of a database generated report. The results outlined the BMP deficiencies observed during the inspection and notified businesses of any Industrial Permit related violations. Inspection results were accompanied by a letter describing the City's storm water program and reason for inspection. The letter also directed facility personnel to the City's website where the minimum BMPs are posted.

Furthermore, the City utilized a priority rating system for follow-up inspections. During FY 2011, the Storm Water Division revised the priority definitions for Priority 1 and Priority 2 follow-ups (Priority 3 remained unchanged) and is summarized in **Table 5-2**.

Table 5-2: Industrial and Commercial Inspection Follow-up Priorities Redefined

Follow-up Priority	Description	Follow-up Conducted
1	• Active Discharge, evidence of past discharge that appears likely to recur in the future • Severe BMP deficiency	• Active discharges are referred to Storm Water Division Code Compliance Officers for immediate follow-up • Evidence of past discharges, or BMP issues are referred to Inspectors for follow-up
2a	• Significant BMP deficiency with a higher threat (enforcement action is likely necessary	• Referred to inspectors for follow-up
2b	• BMP deficiency with a lower threat	• Referred to Storm Water Division's Industrial and Commercial Inspections consultant for follow-up
3	• Minor BMP deficiency	• The inspection report mailed to the business lists the required corrections and tells the recipient that there is a possibility of a follow-up inspection.

As a result of the industrial and commercial inspections conducted by the Storm Water Division in FY 2011, there were a total of 114 Priority 1 facilities, 858 Priority 2 facilities, and 1,945 Priority 3 facilities identified and 78 facilities where no follow-up was needed[4]. All priority 1 and 2 facilities have received follow-up during the reporting period. 70 Priority 1 and 455 Priority 2 follow-ups have been resolved through the following actions

Table 5-3: Type of Follow-up Actions for Priority 1 and 2 Resolved Sites

Type of Follow-up Action	# of Actions for Priority 1 Sites	#of Actions for Priority 2 Sites
Administrative Citation	30	21
Corrective Action Letter	4	2
Education	13	117
Follow-up Inspection	8	250
No Action Taken	0	2
No Evidence Found	0	1
Notice of Violation	15	62
Total	**70**	**455**

While all of the Priority 1 and 2 follow-up locations are being investigated and enforced, there are still 44 Priority 1 and 403 Priority 2 follow-up locations where the Storm Water Division's Enforcement and Inspections group continue to work with the facilities to resolve the issue or are working on the appropriate paperwork to close out the case in the database. Follow-up inspection cases often take more time than complaint investigation cases because there are

[4] Follow-up information is included for all jurisdictional industrial/commercial inspections conducted and all watershed-focused inspections conducted during the reporting period.

usually multiple issues that need to be addressed for compliance. Any site where an active discharge was observed has been resolved and compliance achieved. An overall summary of the follow-up case resolution in regards to active discharges is summarized in Table 5-4.

Table 5-4: Follow-up Status by Discharge Type

Follow-Up Priority	Total #	# Resolved	# In Progress	% Resolved
Active Discharge Observed	61	61	0	100%
No Active Discharge Observed	911	464	447	51%
Totals	972	525	447	54%

During FY 2011 the Enforcement and Inspection group continued to send out letters documenting the issues and requesting the industrial or commercial operator to fix the issues and send back photo documentation of the corrective action taken to illustrate compliance within 10 business days. The City has found this to be an effective means of communication for achieving compliance and have received the requested documentation from the industrial or commercial operators.

5.2.4 Table 5-1 Item No. 8

Industrial and Commercial inspections are conducted through three (3) methods: The Public Utilities Department's Wastewater Branch's Industrial Wastewater Control Program (IWCP) inspections, the Public Utilities Department's Wastewater Branch's Food Establishment Wastewater Discharge (FEWD) inspection program, and the Storm Water Division's inspection program. Table 5-5 summarizes industrial and commercial facility inspection numbers for FY 2011. During FY 2011, the Storm Water Division conducted a total of 2,982 inspections. This number includes watershed-focused inspections conducted as part of the watershed program, follow-up inspections or site visits where inspections could not be conducted. However, the Storm Water Division only utilizes the number of routine full inspections (that were not watershed-focused inspections) for purposes of determining the percentage of facilities inspected.

Table 5-5: Stationary Industrial and Commercial Facilities Inventoried and Inspected

Number of Facilities Inventoried	IWCP Inspections	FEWD Inspections	Storm Water Division Routine Full Inspections	Total Inspections	% of Inventoried facilities inspected
18,574	57	3,454	2,789	6,300	34%

5.2.5 Table 5-1 Item No. 11

The mobile sources inventory is based on the same sources of information utilized for the industrial and commercial stationary inventory as noted above. Of the 24,395 currently inventoried industrial and commercial facilities within the City, 5,821 are mobile businesses, while the other 18,574 are stationary facilities. There are one high TTWQ, 1,664 medium TTWQ, and 4,156 low TTWQ mobile businesses. The FY 2011 updated inventory and prioritization is included in **Appendix I** of this report

The City has identified minimum BMPs that are required for all mobile businesses based on the type of activity that is being conducted (see *Appendix XI, "Minimum BMPs for Mobile*

Businesses", of the City's 2008 JURMP). There were no changes to the minimum BMPs required in the City's 2008 JURMP during the FY 2010 reporting period.

During FY 2011, Storm Water Division Code Compliance Officers conducted 12 investigations of potential discharges associated with mobile businesses (**Appendix F**). As a result of the investigations, enforcement actions were taken and are summarized in **Table 5-6** below.

Table 5-6: FY 2011 Mobile Business Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Administrative Citation	3
Education	2
Found to be Exempt	1
Letter	1
Notice of Violation	5
Total	**12**

As a result of the mobile business investigations, the City conducted 10 follow-up activities and compliance was achieved at all 12 mobile business investigations.

Other than one-on-one outreach provided to individual mobile businesses, during investigations and/or enforcement, there were no education and outreach efforts conducted for mobile businesses during FY 2011.

5.2.6 Table 5-1 Item No. 12

Complaint Investigation Follow-up and Enforcement – Stationary Industrial and Commercial Facilities

During FY 2011, Storm Water Division Code Compliance Officers conducted 283 investigations of potential discharges associated with industrial and commercial facilities (**Appendix F**). As a result of the investigations, enforcement actions were taken and are summarized in **Table 5-7** below.

Table 5-7: FY 2011 Stationary Industrial and Commercial Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Administrative Citation	45
Unknown	1
Education	50
Found to be Exempt	6
Letter	26
No Action Taken	31
No Evidence Found	13
Notice of Violation	98
Pending[5]	3
Referred to another Department	10
Total	**283**

[5] Pending enforcement actions will be reported in the FY 2012 JURMP Annual Report.

As a result of the 283 investigations, the Storm Water Division Enforcement and Inspections Group conducted 280 follow-up activities, and compliance was achieved at 280 of the 283 investigations of industrial and commercial facilities during FY 2011. Three (3) investigations are still in progress at the time of this reporting. The resolution of these investigations will be included in the FY 2012 JURMP Annual Report.

5.2.7 Table 5-1 Item No. 14

The City conducted notable activities related to its implementation of the Industrial and Commercial component. These notable activities are described below.

- As noted above, the Storm Water Division revised the definitions of priority 1 and 2 follow-ups. The Storm Water Division also improved the tracking of inspections with a follow-up priority of 1 or 2 in its tracking database, SAP. For each site that required a follow-up inspection (priority 1 or 2), a new notification was created in SAP to record the inspection, it was tagged as a failed first inspection, and supporting materials such as inspection photos and a scanned copy of the inspection form were uploaded to the database. Sites believed to present more immediate threats to water quality were assigned to Storm Water Division staff inspectors, and sites with less urgent deficiencies were assigned to the Storm Water Division's inspection contractor for follow-up. This process allowed the Storm Water Division to more effectively track compliance status of sites found to be noncompliant, and for which enforcement actions were necessary and also to more effectively prioritize noncompliant sites for follow-up to allocate limited inspector resources as efficiently as possible.
- During the fiscal year the Enforcement and Inspection Group worked with RWQCB staff to target non-filers posing a comparatively high threat to water quality, and the RWQCB issued NOVs and expedited payment letters to several of these sites.

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6 RESIDENTIAL

6.1 PROGRAM IMPLEMENTATION

Table 6-1 represents the City of San Diego's implementation of the Residential component as it relates to the Municipal Permit requirements during FY 2011. For any items in the table where an explanation, description, results, inventory, or examples are necessary, references are noted in the table, and are included as an Appendix or are provided in Section 6.2. During FY 2011, the City was compliant with all elements of Section D.3.c. of the Municipal Permit.

Table 6-1: Residential Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	Identification of the high threat to water quality residential areas and activities that were focused on.	The City considers all residential areas within City limits to be high threat to water quality residential areas and activities.
2	Confirmation that the designated BMPs were implemented, or required to be implemented, for residential areas and activities.	Confirmed. Designated BMPs, per Appendix XII of the JURMP, were required to be implemented
3	A description of efforts implemented to facilitate proper management and disposal of used oil and other household hazardous materials.	See Section 6.2.1 below
4	Types and amounts of household hazardous wastes (HHW) collected, if applicable.	494 tons of mixed HHW
5	The number of violations and enforcement actions (including types) taken for residential areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.	NOV = 150 Citation = 84 Civil Penalty = 0 For more information see Section 6.2.2
6	A description of any evaluation of methods used for oversight of residential areas and activities, as well as any findings of the evaluation.	See Section 6.2.2 for description
7	A description of collaboration efforts taken to develop and implement the Regional Residential Education Program.	See Section 6.2.3 below
8.	A description of notable activities conducted to manage urban runoff from residential areas and activities	See Section 6.2.4 below

6.2 DISCUSSION SUPPORTING TABLE 5-1

6.2.1 Table 6-1 Item No. 3 and No. 4

Environmental Services Department (ESD) held eight (8) auto product recycling events in order to provide City residents with opportunities to properly dispose of used oil, oil filters, and contaminated oil. ESD promoted these events via event flyers which were distributed to City facilities; the Union Tribune, Pennysaver inserts; and produced ads in English, Spanish, Tagalog, and Vietnamese in various locally distributed newspapers. The City's Miramar Household Hazardous Waste Transfer Facility was open 47 Saturdays during the respective reporting period and accepted used oil, oil filters, and contaminated oil from City residents. Further information regarding the event promotional material is summarized in **Table 6-2**. Additionally there were 19 inspections conducted of certified oil collection centers during the reporting period.

Table 6-2: FY 2011 ESD HHW Program Education and Outreach to the Public

Outreach Material	Target Audience*	# of times	Estimated # of people targeted
Auto Product Recycling Event Schedule	4	Ongoing	~10,000
Auto Product Recycling Event Water Bill Insert	4, 5	4	Circulation is 270,000 with one distribution
Auto Product Recycling Event Pennysaver Inserts	4,5 (all mailing addresses in selected zip codes)	8	755,283
Auto Product Recycling Event San Diego Union Tribune Inserts	4,5 (all mailing addresses in selected zip codes)	6	117,426
Auto Product Recycling Event Ads	4, 5	10	287,578

*Construction Site Owners and Developers; 2. Industrial Owners and Operators; 3. Commercial Owners and Operators; 4. Residential Community, General Public, and School Children; 5. Under-represented audiences in 1-4

6.2.2 Table 6-1 Item No. 5 and No. 6

Verification and enforcement of the Minimum BMPs for Residential Areas and Activities occurred at the jurisdictional level. During FY 2011, the City's Storm Water Hotline, (619) 235-1000, was a tool provided to the public so they could report violations of the Storm Water Ordinance. Violations were also recorded as observed by Code enforcement staff in the field. These mechanisms represent the methods utilized by the Storm Water Division as oversight of residential areas and activities. During FY 2011, Storm Water Division Code Compliance Officers conducted 580 investigations at residential locations (**Appendix F**).

As a result of the investigations conducted by the Storm Water Division's Enforcement and Inspections Group, the enforcement actions in **Table 6-3** were taken.

Table 6-3: FY 2011 Residential Enforcement Actions Taken

Type of Enforcement Action	Number of Actions
Administrative Citation	91
Education	96
Found to be Exempt	8
Letter	73
No Action Taken	59
No Evidence Found	38
Notice of Violation	157
Referred to another Department	15
Unknown	1
Pending[6]	42
Total	**580**

As a result of the 580 residential investigations, the Storm Water Division's Enforcement and Inspections Group conducted 322 follow-up inspections, and compliance was achieved at 538 of the 580 residential investigations. The 42 remaining investigations are still in progress, and the follow-up to close out the case was not completed at the time of this reporting. The resolution of these investigations will be included in the FY 2012 JURMP Annual Report.

6.2.3 Table 6-1 Item No. 7

Regional Residential Education Program

Think Blue was a sponsor of both the 2010 and 2011 San Diego County Fairs during FY 2011. *Think Blue* utilized pet and automotive-themed display booths and provided targeted information and giveaways to reach pet owners and auto enthusiasts. *Think Blue* also sponsored the Fair's "EnviroDay" on June 18, 2011 and invited members of the Regional Residential Sources Workgroup to distribute regionally-themed information. Additional information regarding Regional Residential Education activities for FY 2011 will be included in the Regional Urban Runoff Management Plan (RURMP) Annual Report submitted to the San Diego RWQCB in January 2012.

6.2.4 Table 6-1 Item No. 8

There were no additional notable activities conducted for residential areas and activities other than the efforts described above during FY 2011.

[6] Pending enforcement actions will be reported in the FY 2012 JURMP Annual Report.

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7 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Per RWQCB Addendum No. 2 to Order R9-2007-0001, the City will submit this section in its entirety on December 15, 2011.

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8 EDUCATION

8.1 PROGRAM IMPLEMENTATION

Table 8-1 represents the City of San Diego's implementation of the Education component as it relates to the Municipal Permit requirements during FY 2011. For any items in the table where an explanation, description, results, inventory, or examples are necessary, references are noted in the table and are included as an Appendix or are provided in Section 8.2. During FY 2011, the City was compliant with all elements of Section D.5 of the Municipal Permit.

Table 8-1: Education Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	A description of education efforts conducted for each target community.	The target communities are covered in items 2-6 of this table and all descriptions provided in Sections 8.2 below and noted Appendices are applicable to this item.
2	A description of how education efforts targeted underserved target audiences, high risk behaviors, and "allowable" behaviors and discharges.	See section 8.2.1 below
3	A description of education efforts conducted for municipal departments and personnel.	See section 8.2.2 below
4	A description of education efforts conducted for the new development and construction communities.	See section 8.2.3 below
5	A description of education efforts conducted for Industrial and Commercial owners/operators	See section 8.2.4 below
6	A description of jurisdictional education efforts conducted for residents, the general public and school children.	See section 8.2.5 below

8.2 DISCUSSION SUPPORTING TABLE 8-1

8.2.1 Table 8-1 Item No. 2

Hispanic Outreach

Think Blue formed partnerships with local non-profits including I Love A Clean San Diego, the Media Arts Center and Tijuana River National Estuarine Research Reserve in an effort to engage and educate the Hispanic community within San Diego. *Think Blue* staffed a number of informational booths and handed out educational materials in Spanish at a number of Hispanic community events such as the San Diego Latino Film Festival and Fiesta Del Rio. Additional events are detailed in **Appendix O**. Other efforts included providing bilingual staff to answer questions and distribute informational surveys to assess knowledge of storm water issues among Hispanic and Spanish-speaking residents. *Think Blue* continued to air public service announcement in Spanish on both Spanish language television and radio stations. Other departments in the City, such as ESD, also utilized print media when targeting underserved audiences to inform individuals about auto product recycling events as noted in Section 6.2.1, Residential. The City will continue to look for opportunities to reach other underserved target audiences including Vietnamese and Filipino communities, among others.

8.2.2 Table 8-1 Item No. 3

Municipal Departments and Personnel

Municipal General Storm Water Training

New Employees

During FY 2011 *Think Blue* conducted four quarterly trainings at the City's "New Employee Orientation" (NEO) workshops. Newly hired City staff who were in attendance (between 35-55 per workshop) received a basic introduction to storm water issues through an introductory presentation and the "Storm Water News You Can Use" video training module created by *Think Blue*.

During the reporting period, a total of 193 new employees received training. All staff who attended were given a pre-test and a post-test containing questions related to storm water and the topics covered in the training. The results from the tests showed that the training sessions resulted in substantial increase in knowledge of stormwater issues among new City employees. The average score on the pre-test was 3.02 out of 5 (60%) and the average score on the post-test was 4.70 out of 5 (94%). More analysis can be found in Section 12, Effectiveness Assessment, of this report.

Existing Employees

During the previous reporting period (FY 2010), the Pollution Prevention Division began formulating ways to incorporate the new storm water training video into the "refresher" storm water training for existing City employees. The refresher training is intended to be given every two years to randomly selected City staff with regular access to a computer. Research was conducted to determine the feasibility of implementing a training that contained a knowledge assessment component, and was administered through "e-tests" to City employees. During FY 2011, while the City continued to centralize employee training functions during the reporting period, the Division continued to gather graphic materials and review survey data and tools to be used in the development of a computer based training module in conjunction with the Employee Training Division and the web development team.

City Council
In an effort to keep members of the City Council informed and aware of local storm water issues, Municipal Permit compliance activities, and state and local regulations, the Storm Water Division continued to schedule informational briefings with council members and staff throughout FY 2011 on an as needed basis. This fiscal year, emphasis was placed on educating Council members regarding the core functions of the Storm Water Division, and upcoming water quality CIP projects. Storm Water staff also provided informational briefings to individual Council members, and other additional briefings when requested.

Activity-Specific Storm Water Training

Municipal Development Planning and Municipal Construction Activities
During FY 2011, the Development Services Department and the Public Utilities Department provided storm water-specific development planning and construction training. Details regarding this training are included as Appendices M-1 and M-2.

The Storm Water Division's engineering staff provides assistance to other City Departments (such as ECP and DSD) with the training and implementation of the municipal storm water development planning requirements, and training in municipal construction activity requirements. In order to stay informed regarding new development planning storm water information and policies and new construction information, Division staff receives training from a variety of sources. During FY 2011, Division staff attended the following trainings:

- QSD Training (March 2011);
- World Environment and Water Resources Congress (May 2011);
- CASQA Conference (November 2010);
- Inspection and Maintenance Workshop (April 2011); and
- Pervious Paver Presentation by ORCO Brick and Block (June 2011).

The Storm Water Division also distributes the *Stormwater* Magazine and *Erosion Control* magazine as additional informative resources to Division staff.

Municipal Industrial/Commercial Activities
Industrial and commercial staff from the Transportation & Storm Water Department with responsibility for conducting storm water compliance inspections and enforcement of industrial and commercial facilities received the required annual training as summarized in **Appendix M-3**. FEWD and IWCP inspectors with the Public Utilities Department's Waste Water Branch received training in FY 2010, but did not receive training in FY 2011 due to a training oversight. The Transportation & Storm Water Department is assisting the Waste Water Branch to ensure that the appropriate training is conducted in early FY 2012.

Other Municipal Activities
Departments that performed work activities specifically identified in the Municipal Permit and/or performed work that directly impacted storm water quality provided activity-specific training sessions to their employees. During FY 2011, City Departments/Divisions conducted over 100 activity-specific trainings for staff (see **Appendix M-4** for more details).

8.2.3 Table 8-1 Item No. 4

Construction Site Owners and Developers

The Storm Water Division also provided outreach and education to construction site owners and developers. During FY 2011, the Enforcement and Inspections Section distributed 134 "Clean Construction" brochures flyers to construction site owners and developers. Additionally the Construction and Development Standards Section provided ongoing updates to the informational construction documents via the City's storm water website, and provided an HMP update to the City's Storm Water Standards Manual.

8.2.4 Table 8-1 Item No. 5

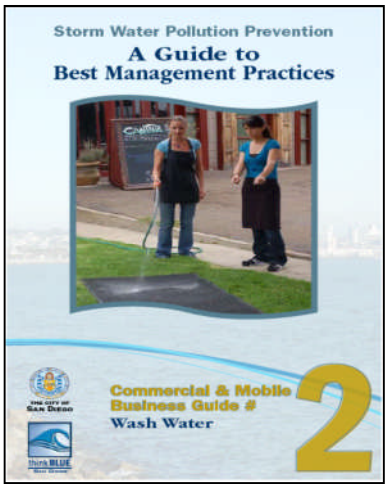
Industrial and Commercial Owners and Operators

During FY 2011, the Storm Water Division targeted Industrial and Commercial Owners and Operators by distributing educational materials during facility inspections. A summary of the material distributed is included in **Table 8-2.**

Table 8-2: FY 2011 Educational Material Distributed to Stationary Industrial and Commercial Sites/Sources

Material	# Distributed
NOI	193
NONA/NEC	360
Industrial Facilities Handout – English	42
Industrial Facilities Handout – Spanish	18
Spills Handout – English	1,266
Spills Handout – Spanish	207
Impervious Surfaces Handout – English	1,402
Impervious Surfaces Handout – Spanish	210
Automotive Fluids Handout – English	757
Automotive Fluids Handout – Spanish	86
Industrial/Commercial Regulations Handout	1,791
Dumpster and Loading Dock Area Handout – English	1,406
Dumpster and Loading Dock Area Handout – Spanish	163
Car Washing Handout	80

Material	# Distributed
Think Blue Poster – English	26
Think Blue Poster – Spanish	53
Authorization/Intro Letter – English	2,760
Authorization/Intro Letter – Spanish	2
Authorization/Intro Letter – Vietnamese	1
BMP Guide – Landscaping Practices	2
BMP Guide – Trash Areas	36
BMP Guide – Washing Activities	8
BMP Guide – Pet Waste Disposal	55
BMP Poster – English	61
BMP Poster – Spanish	110
Think Blue Calendar	104
Think Blue Tips – English	110
Think Blue Tips – Spanish	30
Template – Best Management Practices	2,744
Template – Hazardous Materials Inventory	1,077
Template – Spill Plan	2,514
Template- Education	2,560
TOTAL	**17,674**



In a previous reporting period (FY 2009), *Think Blue* initiated a plan to implement more comprehensive outreach to local businesses in the City of San Diego through the creation of several BMP Guidebooks for businesses. Each Guidebook focuses on specific activities and requirements under the Storm Water Ordinance. The eight topics covered include:

1. hazardous materials;
2. wash water;
3. commercial vehicles;
4. landscaping;
5. fire sprinkler discharges;
6. trash storage and parking areas;
7. employee storm water training; and
8. outdoor activity (signage and storm drain protection).

During FY 2011, development of content for the Business Guidebooks continued, and further information will be provided as part of the FY 2012 JURMP Annual Report.

The City's Airport Division also conducted outreach to the industrial target audience by sending informational material to its tenants and lessees addressing Airport policies regarding the Storm Water Pollution Prevention Plan (SWPPP) and the City's regulatory compliance expectations.

During FY 2011, the City's Treasurer's Office also included a business newsletter in the mailing of business tax certificates to all businesses within the City. The newsletter contains a Think Blue section with general information on pollution prevention for businesses (Appendix N). There were approximately 1,900 business tax certificates mailed out weekly.

8.2.5 Table 8-1 Item No. 6

Residential Community, General Public, and School Children

Media Efforts

In FY 2011, media advertising plans continued to place an emphasis on targeting a younger male audience, as well as a middle-aged female audience. Research conducted by the City has shown that young men are more likely to engage in high risk behaviors, have less knowledge of storm water issues, and are more likely to pollute than other demographics. Therefore, the media mix continued to focus on the male demographic, including sports and automotive programming on television and radio stations. A percentage of the advertising still targeted an older female demographic in order to maintain consistency with the previous year's campaign and continue to build awareness of the *Think Blue* brand and storm water issues across both genders.

During the reporting period, the division continued to air its more popular and impactful public service announcements (PSAs) including "Karma" and "Fowl Water". *Think Blue* also continued to air six "Pollution Prevention Requirements" PSAs which focus on the City's storm water ordinance that requires residents and businesses to implement minimum BMPS to reduce pollution. The radio and television spots were aired in English and Spanish to maximize audience reach and retention.

Think Blue also continued its business outreach initiative by working with local radio stations (KIFM-FM, XTRA-FM) to create a contest encouraging businesses to contact the stations and describe what their businesses do to "*Think Blue*" and prevent pollution in San Diego. More

than 250 entries were received between the two stations, and prizes were awarded to those businesses that had the best or most innovative responses.

The television and radio PSAs aired a total of 4,463 times and made an estimated 46,783,489 impressions. Additionally, placement on media websites resulted in an estimated 8,758,381 impressions during the reporting period.

Television and radio media opportunities in FY 2011 continued to include several community events such as music festivals, car shows and live remotes to widen *Think Blue's* exposure to the target demographics. Other advertising elements included the incorporation of *Think Blue* tips and messaging on environmental-themed web pages of several media outlets. Local radio personalities from XHTZ-FM and KFMB-FM provided ad lib endorsement spots discussing pollution and storm water issues to encourage listeners to change their behaviors by using a direct appeal from a person they like and trust, as opposed to simply a generic PSA. *Think Blue* also leveraged partnerships with San Diego sports teams including the San Diego Chargers, and the San Diego State Aztecs in order to reach the young male target audience via sporting events and venues.

Think Blue also showed its popular Karma PSA in nine movie theaters throughout San Diego. The spots ran prior to the feature movie and made an estimated 374,698 impressions during this reporting period.

Qualcomm Stadium also reached approximately 50,000 individuals by displaying the *Think Blue* message on the marquee at the stadium 20 times during the reporting period. Qualcomm Stadium also had signage to promote the proper disposal of trash and recycling during events at the Stadium, and all inlet grates are painted with the "No dumping drains to Ocean" message. There were approximately 900,000 individuals at the Stadium during FY 2011 who may have been influenced by this signage.

Community and Special Events

Community and special events offer a variety of opportunities for the *Think Blue* program to educate the public about storm water pollution prevention. The table below summarizes the community and special events that *Think Blue* implemented and/or participated in during FY 2011 in order to gain access to both the general public and specific target audiences for the purposes of education. There were approximately 2,982,100 total attendees at the events in which *Think Blue* participated in during FY 2011, and a summary of the larger events attended by *Think Blue* is provided in **Appendix O**.

Collateral Materials

Appendix P identifies the *Think Blue* collateral materials available and distributed in FY 2011 to both general and targeted audiences. The italicized entries were new items for FY 2011. During FY 2011, the Pollution Prevention Division distributed a total of 43,844 materials, 39,001 of which were in English and 4,843 of which were in Spanish. Other City Departments/Divisions also distributed additional collateral materials to target audiences in FY 2011 and the summarized information is included in **Appendix P**.

Education for School Age Groups

In 2010-2011, Project SWELL reached more than 50,000 students in five grades in San Diego Unified School District (SDUSD), and one grade level in Oceanside Unified School District (OUSD). It was taught in 135 elementary schools in SDUSD and 17 elementary schools in OUSD. Separate SWELL hands-on materials kits have been created for all grade levels to ensure that

students and teachers have adequate resources to thoroughly explore their local water issues. Additionally, project partners collaborated to recreate the Project SWELL website to be adaptive to developing technologies in the classroom, and to reach more teachers countywide.

In addition to SWELL in the classroom, San Diego Coastkeeper (project partners) participated in several community education events based on Project SWELL lessons, to ensure that students without access to hands-on science kits in their classroom are able to experience the benefit of Project SWELL's unique learning system. Events included: San Diego Junior Lifeguards Environment, San Diego High Tech Fair, San Diego Science Festival, Walk the Watershed, World Oceans Day, Kids Korp summer camp program, and Coastkeeper's Signs of the Tide education forum.

Table 8-3 identifies the *Think Blue* collateral materials available and distributed in FY 2011 to student age groups by *Think Blue*.

Table 8-3: FY 2011 *Think Blue* Collateral Materials for Student Age Groups

Category Title	Quantity Distributed in FY 2011
San Diego Unified School District SWELL: Kindergarten, "Clean Water in San Diego"	10,872
San Diego Unified School District SWELL:2nd grade "Pebbles, Sand, and Silt" Kit	11,042
San Diego Unified School District SWELL: Investigation 4th Grade "Ecosystems" Kit	10,317
San Diego Unified School District SWELL: Investigation 5th Grade "Water" Kit	9,618
San Diego Unified School District SWELL: Investigation 6th Grade "Landforms" Kit	9.973
Oceanside Unified School District SWELL: 5th Grade Kit	1,689
Total	**53,511**

Junior Lifeguards' Environmental Day: The San Diego Junior Lifeguard program is a City program run by the Lifeguards Division of the Fire-Rescue Department. The program is implemented every summer for two one month sessions. The Junior Lifeguards program introduces young people to safe marine and aquatic recreational opportunities, and is designed to improve young people's physical conditioning, their understanding and respect for the environment, and their respect for themselves and others. Junior Lifeguards (JGs) range in age from 9-17 years old. FY 2011 was the 3rd Annual *Think Blue* Environmental Day for the Junior Lifeguards.

EnviroDay: *Think Blue* partnered with several other City Departments as well as several NGO's to create a broad-based experience for the children called EnviroDay during FY 2011. This one-day event took place during both of the 2010 summer sessions and one 2011 session. (July 15, August 6, 2010 and June 30 2011). Partners included *Think Blue*, City of San Diego Lifeguards, City of San Diego Environmental Services Department, City of San Diego Public Utilities Department, Water Conservation Division, I Love A Clean San Diego, Scripps Institution of Oceanography and San Diego Coastkeeper.

The EnviroDay event was set up like an educational fair, with each partner hosting a booth focused on environmental topics. The children spent approximately 15 minutes and at each booth, then rotated to the next booth. The following activities were among the topics presented at the various educational booths: E-waste, Water Conservation, Environmental Jeopardy,

Marine Life Critter Learning Station, Recycle Relay Race, Watershed Model Demonstration, Ocean Acidification Touch Tank and a Water Quality Testing Demonstration. Each summer session enrolled approximately 250 children and a total of 738 children were educated as a result of *Think Blue*'s Enviro-Day.

9 PUBLIC PARTICIPATION

9.1 PROGRAM IMPLEMENTATION

Table 9-1 represents the City of San Diego's implementation of the Public Participation component as it relates to the Municipal Permit requirements during the FY 2011 reporting period. During FY 2011, the City was compliant with all elements of Section D.6 of the Municipal Permit.

Table 9-1: Public Participation Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	A description of public participation efforts conducted	See Section 9.2.1 below

9.2 DISCUSSION SUPPORTING TABLE 9-1

9.2.1 Table 9-1 Item No. 1

The following storm water pollution prevention public participation efforts were implemented by the City of San Diego during FY 2011.

Residential Telephone Survey

In February 2011, the Storm Water Division conducted a telephone survey of adult residents in the City of San Diego. The purposes of the survey were:

- To explore residents attitudes about storm water pollution;
- To explore barriers to behavioral change that might reduce storm water pollution; and
- To assess different potential motivations for change including those that address barriers.

Approximately 800 telephone interviews were conducted with adult residents using a random-digit dial methodology, in which active residential and wireless telephone numbers served as the sample. Of these interviews 29% were completed via wireless telephone numbers, and 3% were completed in Spanish. The margin of error for citywide results is plus or minus 3.4% at a 95% confidence level.

Key findings include:

- 53% of all San Diego residents have heard the *Think Blue* slogan, up from 47% in FY 2010
- 57% of residents know that storm water is not treated, which is an increase from 52% in FY 2010 and up from 44% in FY 2009
- Residents who had heard of *Think Blue,* or the steps the City has been taking to prevent storm drain pollution, were more than twice as likely to make a behavior change.

A few questions in this survey were asked in similar studies conducted in previous years. As seen in the key findings, some of the results were compared to those from previous surveys. The report also presents results by subgroups of adult residents (i.e., by men versus women or by zip code) only if the differences are both statistically significant and are of relevance. Where statistically significant and relevant, the results are broken out by watershed. The survey findings are included as **Appendix Q**.

Event Surveys

Additionally, the *Think Blue* program gathered feedback on storm water issues and the program at community events. Members of the public who visited the *Think Blue* booth at community events were encouraged to fill out one of several versions of a short 5-6 question survey. During FY 2010 *Think Blue* implemented three new survey cards focused on specific pollutants, including pet waste, automotive waste and litter and during FY 2011 Spanish versions of the three survey cards were developed.

Survey data was collected at 26 events between July 2, 2010 and June 26, 2011. During FY 2011, a total of 6,898 event survey cards were collected with an additional 1,000+ from the San Diego County Fair. Of the 6,898, 230 were general storm water surveys, 319 were pet waste surveys, 1,937 were automotive surveys, and 4,320 were litter surveys. In addition, there were 92 surveys regarding a new watershed brochure that also included general event questions. The survey cards also included an option for participants to provide an e-mail address to be added to

a mailing list. Nearly 20% of those who filled out a survey card provided an e-mail address, adding to a contact list database consisting of over 5,000 e-mail addresses. The contact list will provide a mechanism to provide additional public participation opportunities for ongoing outreach, including newsletters, emails and for assessment activities such as focus groups.

Public Reporting of Storm Water Violations

Both the Storm Water Hotline and online reporting webpage were useful mechanisms in the identification of residents and businesses that were potentially violating the City's Storm Water Ordinance. In FY 2011, the Enforcement and Inspection Group conducted 1,143 investigations as a result of hotline calls and online reporting. The results of these investigations are summarized throughout this document.

Storm Drain Stenciling

The City coordinated with I Love A Clean San Diego to facilitate the City's Storm Drain Stenciling Program which encouraged volunteers and businesses to paint a "No Dumping, Drains to Ocean" bilingual message above storm drain inlets to increase awareness about litter prevention and watershed connectivity from inland areas to the coast. Throughout FY 2011, ILACSD coordinated 274 volunteers that painted 801 storm drains in 40 communities within the City of San Diego, and contributed 1,020 service hours. Business participation increased 209% from the previous fiscal year. Increased program participation from businesses was attributed to new permit requirements and City storm water inspection letters.

In FY 2011, ILACSD created a comprehensive GIS inventory and database of each drain stenciled during both FY 2010 and FY 2011. A Google Earth Map was created to track stenciled storm drains and identify communities best served by future stenciling projects. ILACSD made further program improvements including an increase in kit stock due to increased business demand and the creation of an educational brochure for distribution at outreach events and cleanups to promote participation in the stenciling program.

Web Site

As comprehensive information repositories, the City's two storm water related web sites (http://www.sandiego.gov/thinkblue & http://www.sandiego.gov/stormwater/index.shtml) continued to encourage public involvement by informing the residents about the important issues associated with the Storm Water Division. During the reporting period, the *Think Blue* website was visited 58,132 times (**Table 9-2**), while the Storm Water Division site was visited 49,000 times (**Table 9-3**). A "visit" is considered a series of actions that begins when a visitor views the first page they are taken to in the site (from a search engine or other source) and ends when the visitor leaves the site or remains idle beyond thirty minutes.

Table 9-2: FY 2011 *Think Blue* Website Visits by Month

Month	Number of Visits	Month	Number of Visits
July 2009	4,157	January 2010	4,442
August 2009	3,930	February 2010	4,669
September 2009	4,210	March 2010	7,538
October 2009	4,283	April 2010	6,017
November 2009	4,299	May 2010	6,639
December 2009	4,334	June 2010	4,614

Table 9-3: FY 2011 Storm Water Website Visits by Month

Month	Number of Visits	Month	Number of Visits
July 2009	3,042	January 2010	4,845
August 2009	3,343	February 2010	4,432
September 2009	3,694	March 2010	5,813
October 2009	3,889	April 2010	4,594
November 2009	3,975	May 2010	5,879
December 2009	4,585	June 2010	5,603

Additionally, the Storm Water Division highlighted its Flood Prevention Tips and *Think Blue* education and outreach program on the City of San Diego home page (www.sandiego.gov) as part of its rotating 'Weekly Web Feature.' The feature is designed to promote achievements, milestones and news stories among City department sites and provides space for a link and small photo.

Meetings, Hearings, Open Houses, and Workshops

The City continued to host and attend public meetings in an effort to provide the public the opportunity to have questions answered and concerns acknowledged. The City also continued to properly notify the public of these meetings, and provided times and locations that are convenient for the public to attend.

The City Planning and Community Investment Department (Planning Department) facilitated public participation through the following forums during FY 2011:

- San Diego River Coalition Meeting, August 10, 2010
- Wetlands Advisory Body, September 9, 2010
- Community Planners Committee, September 28, 2010
- Mission Valley Community Planning Group, October 6, 2010
- Code Monitoring Team, October 13, 2010
- Navajo Community Planning Group, October 18, 2010
- Tierrasanta Community Planning Group, October 20, 2010
- San Diego River State Conservancy, November 4, 2010
- Grantville Redevelopment Stakeholders Committee, November 8, 2010
- Mission Trails Regional Park Citizens Advisory Committee, November 9, 2010
- Mission Trails Task Force, January 20, 2011

The Public Utilities Department Wastewater Branch participated in two community events in FY 2011. The Wastewater Branch staff participated in the San Diego County Apartment Owners Convention (approximately 4,000 attendees) on June 8, 2011, and the Earth Fair in Balboa Park

(approximately 65,000 attendees) on April 17, 2011. By participating in these events, staff was available to discuss issues regarding grease in sewers and answer questions from the public. The Wastewater Branch also conducted 39 educational school tours of treatment plants, reaching approximately 600 school children in FY 2011.

During FY 2011, the Development Services Department (DSD) Land Development Review Division conducted a Technical Advisory Committee (TAC) meeting attended by 20 participants on November 10, 2010. The TAC was open for public participation and covered updates to storm water requirements and new HMP requirements. DSD Inspection Services also was available to the public through their presence at the 2010 Fall Home Garden Show (September 10-12, 2010) and 2011 Spring Home Garden Show (Marcy 4-6, 2011).

Partnerships

During the reporting period, the City continued to seek out and coordinate initiatives and activities with well-established organizations in an effort to engage the public and encourage their support and participation. During FY 2011, *Think Blue* and the Storm Water Division continued to work with local stakeholder groups including San Diego River Foundation, San Diego Coastkeeper, I Love A Clean San Diego, Groundwork San Diego Chollas Creek, the Tijuana River Estuary, and San Dieguito River Valley Conservancy among others to educate the public about storm water issues in each community. The Storm Water Division also maintained partnerships with San Diego Unified School District and San Diego Coastkeeper in an effort to continue, and expand, the Project SWELL curriculum.

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10 FISCAL ANALYSIS

10.1 PROGRAM IMPLEMENTATION

Table 10-1 represents the City of San Diego's implementation of the Fiscal component as it relates to the Municipal Permit requirements during FY 2011. Further explanations and results are provided in Section 10.2. During FY 2011, the City was compliant with all elements of Section G of the Municipal Permit.

Table 10-1: Fiscal Analysis Program Implementation

Item No.	Program Implementation Description	Confirmation and/or result
1	A fiscal analysis of the Copermittee's urban runoff management programs which meets all requirements of section G of Order No. R9-2007-0001.	Completed – See Section 10.2 below.

10.2 DISCUSSION SUPPORTING TABLE 5-1

10.2.1 Table 10-1 Item No. 1

10.2.1.1 General Budget Information

The Storm Water Division is responsible for annually reporting on the JURMP, WURMP, and RURMP's fiscal analysis to the San Diego RWQCB in accordance with the Fiscal Analysis Method. The Storm Water Division collected and analyzed financial information from 23 City departments/divisions through its "Annual Report Form Questions", as well as financial information from within the Storm Water Division. A summary of the findings is included below.

10.2.1.2 Fiscal Analysis Methods

While the City utilized the format and guidelines included in the Fiscal Analysis Method for reporting purposes, a few modifications were necessary in order to address how the City tracks accounts internally. The modifications to the expenditure categories are described in the relevant sections below. In addition, since the City does not specifically track expenditures by municipal permit component for budgeting purposes, in many cases estimated percentages were utilized to allocate expenditures into the appropriate municipal permit component categories, including watershed and regional.

10.2.1.3 Fiscal Analysis Results

10.2.1.4 Expenditures

The City's FY 2011 jurisdictional (JURMP), watershed (WURMP), and regional (RURMP) expenditures for the implementation of the Municipal Permit requirements are summarized in **Table 10-2**.

Table 10-2: FY 2011 Jurisdictional, Watershed, Regional Expenditures Summary

Jurisdictional Component	
Administration	$2,994,910
Development Planning	$11,492,474
Construction	$8,586,297
Municipal (including Non-emergency Fire Fighting expenditures)	$17,982,911
Industrial and Commercial	$1,093,201
Residential, Education, and Public Participation	$2,789,130
IDDE	$7,403,637
Jurisdictional Total	**$52,342,560**
Watershed Component	
San Dieguito Watershed	$338,780
Los Peñasquitos Watershed	$673,939
Mission Bay Watershed	$3,099,989
San Diego River Watershed	$829,279
San Diego Bay Watershed	$2,372,695
Tijuana River Watershed	$790,846
Watershed Total	**$8,105,528**
Regional Component	
Total Copermittee Cost Share for the City of San Diego	$570,432
Additional Regional Costs for education efforts, monitoring, document reviews, regional meeting attendance, and special projects	$143,984
Regional Total	**$714,416**
Total Costs	**$61,162,504**

JURMP Expenditures

The City's FY 2011 City-wide expenditures for the implementation of the jurisdictional Municipal Permit requirements are depicted in **Figure 10-1**. In many cases expenditures were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Storm Water Division utilized the expenditure categories detailed in the Fiscal Analysis Method for jurisdictional reporting. However, because of implementation overlap of the City's education, public participation, and residential Municipal Permit components, it is difficult to separate out individual component costs. Therefore, the expenditures for residential, education, and public participation are reported as one expenditure category.

A total of $52,342,560 was expended in FY 2011 for the implementation of City-wide JURMP activities. This amount includes costs paid by sewer and water rate payers (which are used for sewer and water-related services) and costs reimbursed by project applicants. An overview of the expenditures reflected in this component is described below.

Administration ($2,994,910)
Activities identified in this section represent personnel and non-personnel expenses for administration and contracts, grant management, city-wide management, reporting and assessment of the Municipal Permit.

Development Planning ($11,492,474)
Activities identified in this section represent personnel and non-personnel expenses for plan check reviews, project design and SUSMP implementation, and General Plan updates.

Construction ($8,586,297)
Activities identified in this section represent personnel and non-personnel expenses for plan check review services, field inspections related to grading permits, public improvements, and building activities.

Municipal ($17,982,911)
Activities identified in this section represent personnel and non-personnel expenses for street sweeping, storm drain and channel maintenance, BMP implementation, and municipal facility and activity inspections. Additionally, this section includes the expenditures for Fire Department activities that are not related to emergency fire fighting such as facility inspections, storm water BMPs etc.

Industrial and Commercial ($1,093,201)
Activities identified in this section represent personnel and non-personnel expenses for inspection of industrial and commercial facilities. This also includes personnel and non-personnel expenses for FEWD and IWCP inspections.

Residential, Education, and Public Participation ($2,789,130)
Activities identified in this section represent personnel and non-personnel expenses for educational materials, outreach efforts and events, PSAs, HHW and used oil outreach, and community events.

Illicit Discharge Detection and Elimination ($7,403,637)
Activities identified in this section represent personnel and non-personnel expenses for identification and elimination of illicit discharges, enforcing the City's storm water ordinance and implementation of the administrative civil penalties and citation process, and the urban runoff monitoring program.

WURMP Expenditures
The City's watershed expenditures during FY 2011 for the implementation of the watershed Municipal Permit requirements were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Storm Water Division utilized the expenditure categories (administration, watershed activities, cost share contribution, and other) detailed in the Fiscal Analysis Method for watershed reporting. The watershed expenditures included in this report only capture City expenditures and do not account for any expenditure disbursed by other Copermittees within the watershed(s).

A total of $8,105,528 was expended in FY 2011 for the implementation of City-wide WURMP activities. This amount includes costs for the implementation of applicable TMDLs along with special studies.

RURMP Expenditures

The City's FY 2011 regional expenditures ($714,416) for the implementation of the regional Municipal Permit requirements were provided as actual costs and when the actual costs could not be determined estimates of actual costs were provided. The Storm Water Division utilized the expenditure categories (administration, cost share contribution, regional activities, and other) detailed in the Fiscal Analysis Method for regional reporting. The regional expenditures included in this report only capture City expenditures, and do not account for any expenditure disbursed by other Copermittees in the region.

10.2.1.5 Grant Funding for Special Studies

In addition to resources identified for Municipal Permit requirements, the City actively seeks grants, and other funding sources, for special studies and CIPs. Funding for these projects are limited to the projects specified and cannot be reallocated to other projects. Therefore, these resources are currently not used in calculations for total expenditures. The following table lists projects that were initiated and/or in progress during FY 2011. It is important to note that the projects span multiple years and the amounts listed below are not just representative of FY 2011.

Table 10-3: Funding for Special Projects

Funding Source	Project	Amount	Matching Fund Amount	Total Amount[7]
State Water Resources Control Board	Tijuana River Trash and Sediment BMP Studies	$700,000	N/A	$700,000
State Coastal Conservancy	Tijuana River Nelson Sloan Reclamation Plan	$250,000	N/A	$250,000
State Water Resources Control Board	ASBS Flow Storm Drain Low Flow Diversions	$1,690,000	$465,000	$2,155,000
State Department of Water Resources	Memorial Park Infiltration BMP	$255,651	$295,904	$551,555
Environmental Protection Agency	Kellogg Park Green Lot	$873,000	$714,000	$1,587,000
Total Grant Funding		**$3.77 million**	**$1.47 million**	**$5.24 million**

7 Amounts span multiple years and not just FY 2011

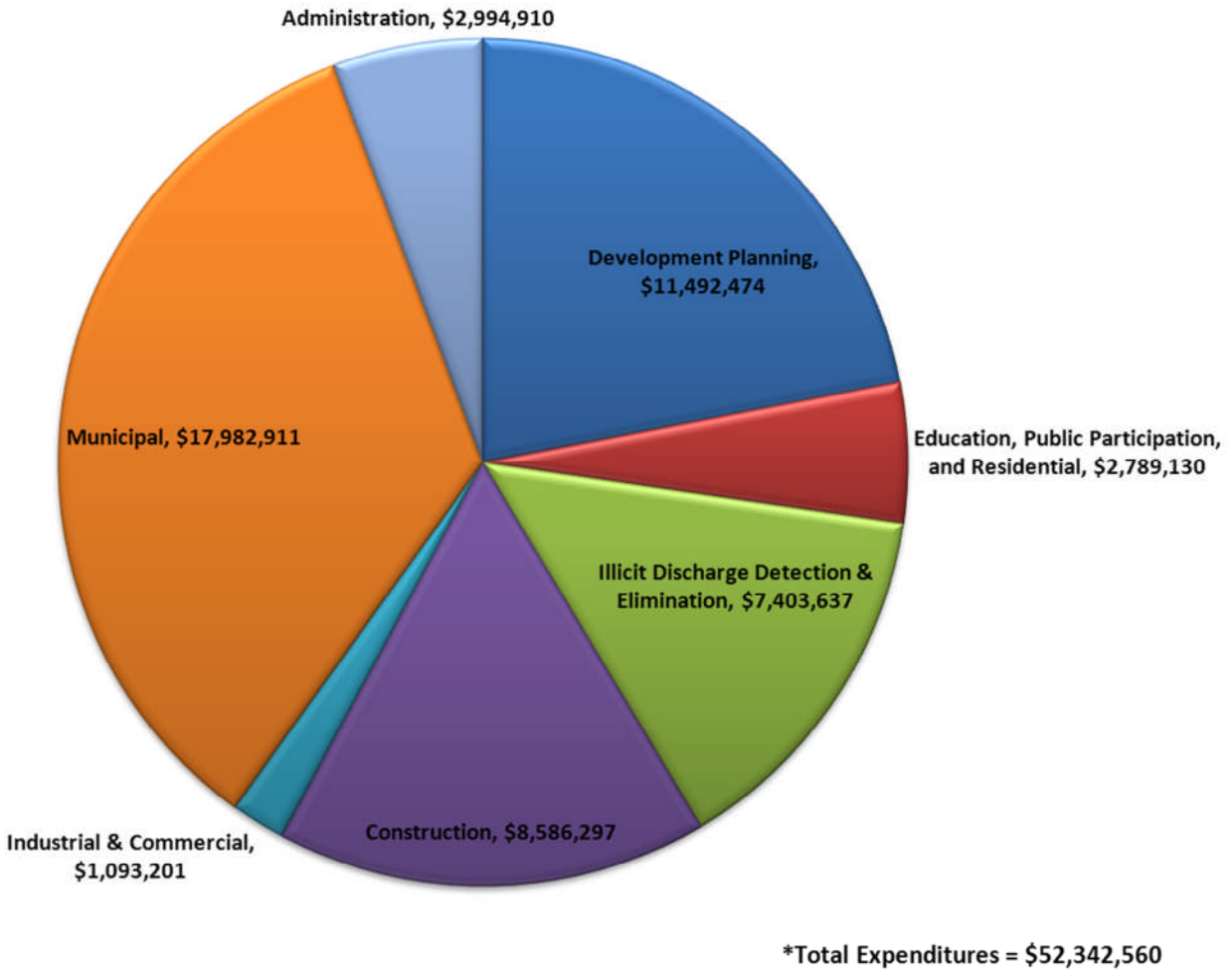

Figure 10-1: FY 2011 Citywide JURMP Expenditures by Permit Area

10.2.1.6 Funding Sources

City-wide implementation of Municipal Permit requirements is funded through four main types of governmental funds: the General Fund, Special Revenue Funds, Enterprise Funds, and Internal Service Funds.

10.2.1.6.1 General Fund

The General Fund is the main fund for the City, and is supported by major revenue sources including property tax, sales tax, transient occupancy tax and franchise fees. Departments funded by the General Fund provide core community services.

10.2.1.6.2 Special Revenue Funds

Special Revenue Funds account for revenues received for specifically identified purposes. Some of the larger funds that fall under this category include Transnet, Gas Tax and Special Promotion programs.

10.2.1.6.3 Enterprise Funds

Enterprise Funds are initiated for specific purposes and funded through fees for services. This funding type is designated for the operations, management, maintenance, and development of the department providing the service. For implementation of City-wide JURMP activities, activities are funded through the following enterprise funds:

- Airports Fund
- Development Services Enterprise Fund
- Golf Course Enterprise Fund
- Recycling Fund
- Refuse Disposal Fund
- Sewer Revenue Funds
- Water Utility Fund

10.2.1.6.4 Internal Service Funds

Internal Service Funds are comprised of fees for services provided by one City department to another City department or division. For implementation of City-wide JURMP activities, activities are funded through the following internal service funds:

- Engineering and Capital Projects Fund
- Equipment Division Funds

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11 SPECIAL PROJECTS

This section identifies and describes the City's completed, ongoing, and planned special projects and grants that are designed to examine and/or improve storm water quality or habitat conditions in the San Diego region.

In addition to its JURMP activities, the City also participates in the implementation of six (6) WURMPs in cooperation with other stakeholders and jurisdictions to improve storm water quality not only within the City's jurisdiction but as part of the larger, regional watersheds. Below is a list of the City's special projects that will be reported by the Watershed Copermittees as part of the FY 2011 WURMP Annual Reports for those watersheds in which the City is a part. The special projects discussed in the WURMP Annual Reports also include storm water related projects implemented under other regulatory programs such as Areas of Special Biological Significance (ASBS), Total Maximum Daily Loads (TMDLs), and Clean Up and Abatement Orders (CAOs).

Special Projects to be Included in the San Dieguito WURMP Annual Report:

- Residential Community Based Social Marketing Pilot – Pet Waste
- Restaurant Outreach: New Codes & Increased Inspections
- Bernardo Center Drive Trash Segregation BMP
- Rancho Bernardo Library Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment System

Special Projects to be Included in the Los Peñasquitos WURMP Annual Report:

- Los Peñasquitos Lagoon TMDL Development – Carroll Canyon Sediment Source Study
- Marindustry Drive Hydrodynamic Separator
- Restaurant Outreach: New Codes & Increased Inspections
- Fiesta de Los Peñasquitos
- ESD Phased Green Mall and Underground Vault
- Mira Mesa Library Bioretention and Infiltration Retrofit

Special Projects to be Included in the Mission Bay and La Jolla WURMP Annual Report:

- Mission Bay Focused Outreach
- La Jolla ASBS Compliance Monitoring
- Mission Bay Sewer Interceptor System Upgrades
- Kellogg Park Green Lot Retrofit Project
- Mount Abernathy "Green Street" Retrofit Project
- Osler Street Hydrodynamic Separator
- La Jolla Dry Weather Flow Diversions (Phase IV)
- Bannock Avenue Streetscape Enhancements
- Avenida de la Playa Low Flow Diversion
- Crew Classic Residential and Tourism Outreach
- La Jolla Shores Storm Drain Inlet Multi-Pollutant Treatment System
- Lindbergh Park Low Flow Limited Storm Drain Inlet Multi-Pollutant Treatment System

Special Projects to be Included in the San Diego River WURMP Annual Report:

- San Diego River Foundation Sponsorship
- San Diego River Bacteria Source ID Study – Phase I – Sector I
- San Diego River WURMP – Water Efficiency Park Project
- Cabrillo Heights Park Rain Garden Filtration Project
- Park Ridge Blvd Bacteria Treatment BMP
- Famosa Slough Erosion Sediment Control BMP
- Robb Field Water Treatment and Reuse
- Qualcomm Stadium Trash Segregation BMP
- Allied Gardens Green Lot
- Complex Street Green Mall
- Famosa Slough Erosion Control BMP

Special Projects to be Included in the San Diego Bay WURMP Annual Report:

- Chollas Creek Diazinon and Dissolved Metals TMDL Monitoring
- Copper Brake Pad Alternative Legislative Mandate
- Chollas, Switzer, Paleta Creek Mouths TMDL Monitoring
- Sweeper Speed Efficiency Study – Phase IV
- Community Based Social Marketing Pilot in Chollas Creek
- Shelter Island Yacht Basin Copper TMDL Monitoring
- Southcrest Park Infiltration Retrofit
- El Cajon Boulevard Trash Segregation BMP Installation
- Memorial Park "Green Lot" Infiltration Project
- 43rd and Logan Biofiltration Project
- Maple Street Canyon Water Quality Improvement Pilot
- Dalbergia (Main) Street Green Mall Filtration
- Beta Green Alley

Special Projects to be Included in the Tijuana River WURMP Annual Report:

- Sweeper Speed Efficiency Study – Phase IV
- Tijuana River Gross Solids and Sediment BMPs Design
- Fiesta del Rio
- Beyer Blvd. Trash Segregation BMP

The following projects span multiple watersheds within the City and may be reported in each of the WURMP Annual Reports:

- I Love a Clean San Diego Trash Clean-up
- San Diego Coast Keeper Trash Clean-up
- Geographically-based Business Inspections
- Targeted Auto Facility Inspections
- Restaurant BMP Booklet Distribution
- Strategic Plan implementation
- Public Service Announcements
- Watershed Brochures
- Pet Waste Bag Dispenser Program

12 EFFECTIVENESS ASSESSMENT

12.1 INTRODUCTION

The Municipal Permit specifies that Copermittees assess both annually and in the long term (five-year intervals), the effectiveness of their JURMP at three levels: programmatic, component, and activity-specific. The City uses these effectiveness assessments as part of an iterative feedback loop that incorporates planning, implementation and assessment of its overall Storm Water Program.

The City has identified areas for future improvement, such as enhanced data collection and information sharing, as well as more frequent departmental coordination. These efforts will help to ensure that the City meets all targeted outcomes for compliance with the Municipal Permit during future reporting periods.

This section outlines an integrated effectiveness assessment process that includes compliance assessment results for FY 2011 and program changes that reflect the City's approach to adaptive management. The City conducts special studies and BMP Efficiency Assessments for a select group of pilot activities to generate recommendations for optimizing its Storm Water Program. Provided below is an update on those assessments and how the City has begun to use them to adapt their management of program implementation.

12.2 EFFECTIVENESS ASSESSMENT PROCESS

The 2008 JURMP describes the City's overall process for assessing and optimizing its Storm Water Program. An abridged version of this process is presented below.

The City's Effectiveness Assessment process is driven by the following goal:

Optimization of the "means & methods" of implementing its Storm Water Program

- Optimization meaning the most cost-effective allocation of resources to effect pollutant load reductions and improvements to storm water quality
- "Means & methods" meaning the processes, materials, treatment controls, equipment, etc. that are used to achieve pollutant load reductions and improvements to storm water quality

The City uses a simplified approach to assessing the effectiveness of its Storm Water Program. Assessment is one phase of the Storm Water Program "Process", which also includes Planning and Implementation phases (**Figure 12-1**).

It is noted that the City does not include in their effectiveness assessment the following items as discussed in the Permit to be used where applicable and feasible:

1) Utilization of outcome levels 5 & 6 to assess the effectiveness of program activities, components and the program as a whole
2) Utilization of monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness of program activities, components and the program as a whole

The above items are found to not be applicable assessment tools at a jurisdictional level because water quality results are not easily associated with the activities as they are implemented,

reported and assessed in jurisdictional programs. The above items are better assessed on a watershed basis where there is a nexus between drainage areas (e.g., watersheds) and water quality. Therefore an Integrated Assessment that includes MS4 contributions and receiving water conditions is not included at this time.

As shown in **Figure 12-1**, the Assessment phase includes an integration of the Baseline BMPs and BMP Efficiency Assessments. By using what is learned about effectiveness and the resources necessary to implement BMPs, the City can refine its Baseline BMPs to maximize resources. The following subsections include descriptions of the two integral pieces of the Assessment phase of the Storm Water Program Process.

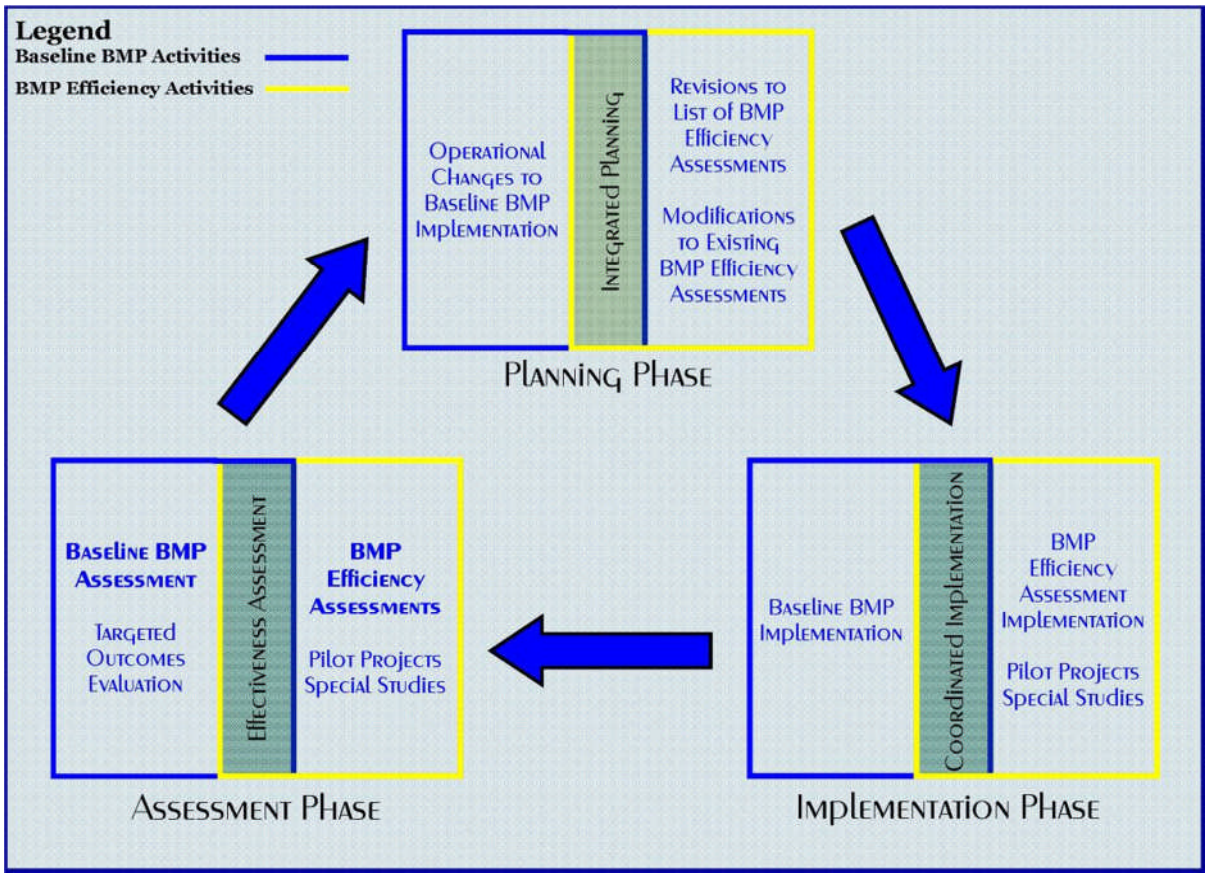

Figure 12-1: Storm Water Program Process

Baseline BMPs

Baseline BMPs include specific Storm Water Program significant activities as identified in the Municipal Permit and the City's 2008 JURMP. The majority of these BMPs are implemented at the jurisdictional level (i.e., citywide). The City uses the Effectiveness Assessment Levels (1-4) defined in the Municipal Permit to evaluate its Baseline BMPs to determine compliance. If targeted outcomes are met, compliance is achieved. If targeted outcomes are not met, the Baseline BMP Assessment will generate recommendations for improvements to the Planning and/or Implementation phases of the City's Storm Water Program Process (**Figure 12-1**). These improvements will ultimately result in the City meeting its targeted outcomes for compliance with the Municipal Permit.

The Baseline BMP Assessment for FY 2011 is located in Section 12-3.

BMP Efficiency Assessments

BMP Efficiency Assessments[8] are defined as pilot projects and special studies or evaluations. The purpose of the BMP Efficiency Assessments is to obtain data and information that may be used to evaluate both the effectiveness and efficiency of BMPs as part of an adaptive management program. By implementing and assessing these pilot projects and special studies, the City can make informed decisions about the appropriate allocation of limited storm water resources to maximize pollutant load reductions and improvements to storm water quality. Furthermore, the results of the BMP Efficiency Assessments will be used to generate recommendations for improvements to the Planning and Implementation phases of the City's Storm Water Program Process. For example, the City will be undertaking a long-term assessment and update of its storm water program efforts as part of the City's watershed-based Comprehensive Load Reduction Plan (CLRP) development to address the recently adopted Bacteria I TMDL and other 303(d) listed pollutants in multiple watersheds. This comprehensive effort will draw from the totality of BMP assessment information the City has amassed over the current Municipal Permit cycle. The City also intends to utilize this planning effort to identify a comprehensive watershed plan and strategy that will serve as the implementation mechanism for the next Municipal Permit.

The City maintains a list of conceptual BMP Efficiency Assessments for program planning purposes. When applicable, each assessment is designed to answer specific management questions for optimizing current Baseline BMPs. Priority for implementation of BMP Efficiency Assessments is based on several factors, including: results of Baseline BMP Assessments, availability of mechanisms to implement the assessments, and availability of resources.
A list of conceptual BMP Efficiency Assessments can be found in Section 12.3.

Integrated Program Assessment

The City integrates its Baseline BMP Assessment and BMP Efficiency Assessments to develop recommendations for optimizing its Storm Water Program.

These recommendations typically fall in one of the three following categories:

1) Revisions to the list of conceptual BMP Efficiency Assessments (additions, deletions or reprioritization)
2) Revisions to implementation of specific BMP Efficiency Assessments
3) Modifications to Baseline BMP implementation (processes, materials, equipment, etc.)

It is this iterative feedback loop that will drive the City's Storm Water Program toward optimization.

Long-Term Assessment

The City participates in efforts of the WURMPs and the Regional Copermittees to develop and implement long-term effectiveness assessments of the programs. These long-term efforts include long-term effectiveness assessments as well evaluation of Outcome Levels 5 & 6 at a watershed scale.

8 BMP Efficiency Assessments are assessments of activities that are above and beyond the Baseline BMPs required by the Jurisdictional portion of Order R9-2007-0001, and may include Pilot Studies and Special Projects or Evaluations.

12.3 EFFECTIVENESS ASSESSMENT RESULTS

12.3.1 Baseline BMP Assessment

The City assesses the effectiveness of its specific activities, program components and overall JURMP by evaluating at the following outcome levels.

Table 12-1: Effectiveness Assessment Outcome Levels 1-4

Outcome Level	Description	Assessment
1	Program Compliance	Measured by comparison to targeted outcomes, and the City's effectiveness at implementing the Municipal Permit
2	Changes in Attitudes, Awareness and Knowledge	Measured by pre- & post-surveys and questioning of specific regulated communities
3	Behavioral Changes and BMP Implementation	Measured by analysis of inspection findings
4	Load Reductions	Measured by direct method – how much waste material is collected and disposed

Level 1 – Compliance Assessment—Activity, Components and Program

Overall program compliance is based on the summation of the individual Municipal Permit component compliance evaluations. Municipal permit component compliance is determined by comparing data collected from departments citywide to the targeted outcomes for specific activities. For FY 2011, the targeted outcomes for each permit activity are defined as fulfilling the baseline Municipal Permit requirements of Order R9-2007-0001. The assessment results are provided in the program implementation tables located at the beginning of each component section of this annual report.

Some highlights from the City's Baseline BMP activities include the following:

- Estimated 46,783,489 Public Services Announcement (PSA) impressions were made – the television and radio PSAs aired a total of 4,463 times
- Estimated 8,758,381 impressions from placement of PSAs on media websites were made
- Estimated 374,698 movie theater impressions were made from "Karma" advertisement
- Estimated 2,982,100 people reached through *Think Blue* community and special events
- Approximately 13,146 tons of debris and sediment removed from City catch basins, inlets, and cleanouts
- Swept approximately 87,413 curb miles and municipal parking lots removing approximately 5,630 tons of debris and sediment from city roadways and parking lots
- ESD collected approximately 494 tons of HHW
- Field Engineering and the Inspection Services Division conducted approximately 60,314 construction site inspections.
- Conducted more than 6,300 inspections of commercial and industrial businesses, resulting in 1,656 businesses inspected above and beyond the Permit requirements

Level 2 – Changes in Knowledge, Awareness and Attitudes Assessment

During FY 2011, the City continued its efforts to collect data and information regarding changes in attitude, awareness and knowledge. Methods of data collection included commercial/industrial business inspections, surveys and assessments of training.

BMP Knowledge Assessments

As in previous years, part of the commercial and industrial business inspection process was to assign each facility inspected a rating to reflect the level of BMP implementation noted at the

site (Level 3 Assessment), and a separate rating to reflect the facility manager/responsible party's level of storm water knowledge. The assessment ratings were designed to gauge knowledge of storm water pollution prevention measures and implementation of effective BMPs. The ratings were assigned based on how many of the following questions were answered correctly:

- What is storm water?
- What is the difference between the storm drain system and the sanitary sewer system?
- Where does storm water flow?
- Is storm water treated prior to discharge?
- What are examples of pollutants?
- Is sediment a pollutant?
- Do you know what good housekeeping or best management practices are?
- Do you know what NPDES is or means?

Individuals who answered all of the aforementioned questions correctly and demonstrated an in-depth knowledge of storm water pollution prevention measures and NPDES were rated "Level 5". Individuals who answered four or more questions correctly, and had a basic understanding of storm water pollution prevention measures but did not know or understand what the NPDES Storm Water Program was received a "Level 4" rating. A "Level 3" rating indicated an individual who answered three questions correctly, "Level 2" indicated one or two correctly answered questions, and a "Level 1" rating indicated that the individual was not able to answer any of the questions correctly.

BMP knowledge assessments have been obtained through business inspections conducted over the past seven years. Over the seven years there has been an increase in the moderate (rating of 3) knowledge of BMP related information amongst the businesses inspected. At the same time, the higher levels (4 & 5) have been decreasing. It is unknown at this time what may be causing these results, however, the City will be investigating this issue with its contract inspectors and determine if modifications to the program are necessary to provide different outreach materials.

Residential Telephone Survey
The Storm Water Division conducted a telephone survey of adult residents in the City of San Diego in February 2011. Approximately 800 telephone interviews were conducted using a random-digit dial methodology, in which active residential and wireless telephone numbers served as the sample. Of these interviews 29% were completed via wireless telephone numbers, and 3% were completed in Spanish. The margin of error for citywide results is plus or minus 3.4% at a 95% confidence level.

Key findings include:

- 53% of all San Diego residents have heard the *Think Blue* slogan, up from 47% in FY 2010 and 39% in FY 2009
- 57% of residents know that storm water is not treated, which is an increase from 52 % in FY 2010 and 44% in FY 2009
- Residents who had heard of *Think Blue* or steps the city has been taking to prevent storm drain pollution were more than twice as likely to make a behavior change.

Event Surveys
In order to assess the effectiveness of event attendance, *Think Blue* implemented a program by which it solicited participation in a brief survey about storm water issues. The survey cards

consist of five to six questions designed to measure storm water knowledge, awareness and behavioral intentions. Data from the *Think Blue* event surveys during FY 2011 collected at 26 events include:

- A total of 8,271 event survey cards were collected
  - 231 were general storm water surveys
  - 1,252 were pet waste surveys
  - 2,395 were automotive surveys
  - 4,393 were litter surveys
- Fifty-nine percent (59%) of the individuals who completed an event survey had heard of *Think Blue* prior to attending the event (4812 individuals)
- Sixty-three percent (63%) of respondents knew that storm water is not treated (5174 individuals)
- Approximately 2% of all of the surveys completed were completed in Spanish (173 individuals)
- Nearly 35% of those who filled out a survey card provided some type of contact information (approximately 2916 people)

The data presented above represent a positive response to *Think Blue's* campaign efforts, including attendance at special events. A consistent presence at events has maintained a high level of knowledge and awareness.

When comparing the FY 2011 event survey data to the FY 2010 and FY 2009 data, the first year of implementation, some improvements are demonstrated. During FY 2011, there was a 9% increase in the number of individuals who had heard of *Think Blue* prior to attending the event compared to FY 2009. There was also a 2% increase in the number of respondents from FY 2010 to FY 2011 who knew that storm water goes untreated.

New Employee Training

Think Blue conducted trainings at the City's "New Employee Orientation" (NEO) workshops. Newly hired City staff in attendance received a basic introduction to storm water issues through a video, "Storm Water News You Can Use". In FY 2011, 198 new employees received the training. All staff who attended were given a pre-test and a post-test containing questions relating to storm water topics covered in the training. Results showed that the training sessions resulted in substantial learning among new City employees. The average score on the pre-test was 3.02 out of 5 (60%). The average score on the post-test was 4.70 out of 5 (94%) demonstrating a successful training course. As in previous years, the most substantial learning is related to knowledge of the storm drain system and that water in the system is not treated before being released into waterways.

Level 3 – Behavioral Changes and BMP Implementation Assessment

During FY 2011, the City continued its efforts to collect data and information for assessing behavioral changes and BMP implementation. The primary method of data collection was inspections of various sites/facilities to determine BMP implementation. Currently, there are only confirmations of BMP implementation available for the majority of the site/facility types with the exception of the commercial/industrial businesses.

As in previous years, part of the commercial and industrial business inspection process was to assign each facility inspected a rating to reflect the level of BMP implementation noted at the site. At the conclusion of each inspection, the inspector evaluated his or her notes and corrective actions and assigned each facility a BMP assessment rating. The following provides a breakdown of how BMP assessment ratings were designated at inspected facilities:

- "Rating 5": means all required general and activity specific BMPs had been implemented effectively. If available, monitoring results indicated that all constituents sampled were below established benchmarks.
- "Rating 4": means BMPs had been implemented effectively but a dumpster lid was observed open and/or oil stains were noted in the parking lot (but were not associated with the business' activities). If available, the monitoring data indicated that one or two constituents were slightly above the established benchmarks.
- "Rating 3": means BMPs had been implemented with the less than two corrective actions identified during the inspection, with the exception of dumpster lids being open or oil stains in the parking lot. If available, monitoring data indicated that one constituent consistently exceeded the established benchmarks.
- "Rating 2": Minimal BMP implementation was in place. Three or more corrective actions were noted, with the exception of dumpster lids being open or oil stains in the general parking lot. No illegal discharge or illicit connection was noted. If available, monitoring data showed concentrations of two or more constituents well above the established benchmarks.
- "Rating 1": A violation of one or more of the City's Storm Water Ordinances (illegal discharge, illicit connection, failure to properly implement required BMPs, and/or significant littering) was noted. BMP implementation was poor.

The commercial/industrial BMP implementation ratings have been obtained for the past seven years. There has been a slight decrease in the higher rates of implementation of BMPs (ratings of 4 & 5) and a slight increase in the lower rate of implementation of BMPs (rating of 1) amongst businesses. The City will monitor this information and may make adjustments to their program in the event that this shift becomes an on-going trend.

Level 4 – Load Reduction Assessment

During FY 2011, the City continued its efforts to collect data and information for assessing pollutant load reductions. The primary method for determining pollutant load reductions was to collect data from departments on specific storm water activities; such as storm drain cleanings, parking lot sweeping, and municipal inspections. Until more data and information becomes available to accurately estimate pollutant load reductions from non-cleaning activities, the City will rely on these activities as the primary quantifiable pollutant load reduction activities.

Below is a summary of the quantifiable pollutant load reduction activities that the City conducted during the FY 2011 reporting period:

- ESD collected 494 tons of HHW.
- The Park and Recreation Department collected 25,550 tons of debris from the parks, beaches, and bay, including over 196 tons of debris collected during the 2010 July 4th holiday along the shoreline of Mission Bay and Shoreline/Beach Parks.
- Storm Water Operations and Maintenance Section conducted 38,361 inspections of catch basins and inlets, and found and cleaned 16,293 catch basins and inlets with accumulated waste exceeding cleaning criteria.
- Storm Water Operations and Maintenance Section found and cleaned approximately 2.64 miles of pipeline that had accumulated waste exceeding the cleaning criteria.
- Total debris removed from catch basins, inlets, cleanouts, and the MS4 was 13,146 tons of waste and litter by the Storm Water Division.
- The City has approximately 39 miles of channels. The channels were inspected in the fall before the rainy season and once in the spring. Approximately 1.93 miles of open

channels were found with anthropogenic litter, 1.93 miles of channels were cleaned, and 19,374 tons of anthropogenic litter and sediment was removed.

- The Storm Water Operation and Maintenance Section crews removed 20,183 tons of debris and sediment from the Tijuana River and Smugglers Gulch channels during emergency flood mitigation operations.
- Through the implementation of the City's street sweeping program, 87,413 curb miles were swept and 5,630 tons of debris (including parking lots) was removed within the City.

12.3.2 BMP Efficiency Assessments

The City has identified BMP Efficiency Assessments to collect data for its programmatic optimization strategy as described in the 2008 JURMP. As previously stated, the City will use several factors to prioritize the implementation of these assessments.

As a part of the BMP Efficiency Assessments, the City has initiated multiple special and pilot projects through its WURMPs. These projects include the collection of targeted data for calculating pollutant load reductions, and activity-specific costs for determining project efficiencies (see project table below). These projects are designed to answer specific management questions and generate recommendations that will feed into the City's overall Integrated Assessment Program. This will ultimately result in greater Storm Water Program optimization.

Table 12-2 below lists the special and pilot projects that have been recently completed, are currently in implementation or are planned for near-future implementation. Projects intended to provide additional data for BMP Efficiency Assessments is listed below:

Table 12-2: BMP Efficiency Special and Pilot Projects by Watershed

Project	San Dieguito River	Los Peñasquitos	Mission Bay & La Jolla	San Diego River	San Diego Bay	Tijuana River
Geographically-based Business Inspections	X	X	X	X		
Route Posting and Median Sweeping, Phase III	X	X		X		
Rancho Bernardo Library Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment	X					
Mira Mesa Library Bioretention and Infiltration Project		X				
Phased Green Mall and Underground Vault Pilot		X				
Targeted Auto Facility Inspections			X			X
Kellogg Park Green Lot Retrofit Project			X			
Mount Abernathy "Green Street" Retrofit Project			X			
Osler Street Hydrodynamic Separator			X			
La Jolla Shores Lane Limited Low Flow Storm Drain Inlet Multi-Pollutant Treatment			X			

Project	San Dieguito River	Los Peñasquitos	Mission Bay & La Jolla	San Diego River	San Diego Bay	Tijuana River
Cabrillo Heights Park Rain Garden Filtration Project				X		
Park Ridge Blvd Bacteria Treatment BMP				X		
Robb Field Water Treatment and Reuse				X		
Allied Gardens Green Lot Filtration				X		
Complex Street Green Mall Filtration				X		
Targeted Aggressive Street Sweeping Pilot Study – Phases I & II					X	
Mobile Trash Collection and Assessment, part of Groundwork San Diego Chollas Creek's Family Stream Team Project					X	
Community Based Social Marketing Pilot in Chollas Creek					X	
Southcrest Park Infiltration Retrofit					X	
Maple Canyon Water Quality Improvement Pilot					X	
Memorial Park "Green Lot" Infiltration Project					X	
43rd and Logan Biofiltration Project					X	
Beta Alley Green Street Filtration					X	
Dalbergia (Main) Street Green Mall Filtration					X	
San Ysidro Green Mall Infiltration Retrofit					X	
Tijuana River Gross Solids and Sediment BMPs Design						X
LID Regulatory Barriers and Solutions Project	X	X	X	X	X	X
Municipal Artificial Turf Evaluation	X	X	X	X	X	X
Municipal Rain Barrel and Downspout Disconnect Pilot Project	X	X	X	X	X	X
Irrigation Hardware Giveaway and Cash for Plants Assessment	X	X	X	X	X	X
Residential Rain Barrel, Downspout Disconnect, and Xeriscaping Project	X	X	X	X	X	X

Since the above list includes activities implemented as WURMP Watershed Water Quality Activities, the implementation updates will be reported in the respective WURMP Annual Reports.

12.3.3 Integrated Program Assessment

Water quality and integrated assessments are most appropriately performed at long-term intervals (e.g., every five years) at a watershed scale where changes in water quality may be detected. The City of San Diego participated in the development of the San Diego Regional Copermittees' 2011 Long-Term Effectiveness Assessment that collected programmatic and water quality data and information from regional, watershed, jurisdictional, and Municipal Permit-required programs (e.g., TMDL programs). The data and information was compiled, analyzed and assessed for areas within the City's watersheds as well as the region. For more information regarding this portion of the City's integrated assessment, the reader is encouraged to review the 2011 Long-Term Effectiveness Assessment (found at www.projectcleanwater.org under Regional Work Products).

Integrated Program Planning

The City will continue to adapt its program based upon assessments of the baseline program and the BMP efficiency assessments. Program adaption may occur to correct compliance issues with baseline program implementation, or as enhancements by implementing its program in a more effective and efficient manner.

Prior to implementing changes to the program through adaptive management, the City evaluates each proposed program modification based on three base criteria:

1) Environmental Benefits (e.g., ability to reduce/eliminate loads or change behavior)
2) Economic Considerations (e.g., cost to implement the program modification)
3) Social/Institutional Benefits (e.g., public support, aesthetic, community engagement)

The Transportation & Storm Water Department makes a determination on implementation based on the results of this analysis.

Baseline BMP Assessment

The City recognizes that in order to have an efficient Storm Water Program, it is important to maintain compliance with the Municipal Permit. During the first quarter of FY 2012, the City has already begun the process of addressing each of the missed targeted outcomes as identified in relevant component sections. The first and foremost action is for the Storm Water Division to provide support to other City departments to complete their specific requirements.

The City of San Diego is one of the largest and most complex municipalities in the region. Having a large and complex organization poses many challenges, such as varying data tracking and reporting systems and multiple lines of communication for educating staff. However, the City is committed to instituting the necessary changes to current processes, protocols and systems to ensure that program requirements are implemented, tracked and reported adequately to the Regional Board. **Table 12-3** lists areas identified for improvement in FY 2012 and provides the status of the corrective actions planned to address these issues.

Table 12-3: Programmatic Corrective Actions

General Issue	Corrective Actions	Current Status
Proper Tracking Construction Inspections for Reporting	DSD-Inspection Services Division will continue to investigate and make corrections to its tracking database so that it can accurately report on the permit required information, including: Reporting the correct number of weeks the project was active in the rainy season as opposed to the number of weeks the permit was open during the rainy season	DSD-IS has initiated revisions by meeting with the Information Technology staff and identifying modifications and enhancements to the database.
Construction Inspections Not Completed	ECP-Field will through training reinforce the requirements for frequency of inspections, namely: high priority project inspections should not exceed two week intervals (not inspected twice a month). Additionally, the newly implemented SWPP database for tracking inspections will be revised to enhance its ability to alert inspectors and supervisors of in section requirements on a project-by-project basis.	ECP-Field has initiated the training and database revisions.
Municipal Inspections Not Completed	The Public Utilities Department's Water Branch will begin the pre-rainy season inspections earlier in FY 2012 to avoid time constraints in completing the inspections at Water Branch facilities. In addition, the Storm Water Division has sent and will send regular reminders to all of the departments to conduct the appropriate municipal facility inspections and that all inspections must be documented.	These actions are currently being implemented.
Municipal Catch Basin Cleaning	The Storm Water Division is currently working with the Public Utilities Department's Water Branch to provide information on the catch basin cleaning requirements.	These actions will be implemented in FY 2012.
Mobile Business BMP Notifications	The Storm Water Division will include BMP information specific to mobile businesses on notifications that will be distributed through a business mailing process or other method.	The Storm Water Division has started the implementation process.
Required Municipal Industrial/Commercial Activities training not conducted for some inspectors	The Storm Water Division is assisting the Public Utilities Wastewater Branch to ensure that the appropriate training is conducted in early FY 2012 for the IWCP and FEWD inspectors	Will be implemented in FY 2012.

In addition to the specific corrective actions identified in **Table 12-3**, the City will conduct post-annual report meetings with City departments. These meetings will focus on revising procedures and developing corrective action plans to address the issues identified above. In the event that there are modifications to the JURMP as a result of the post-annual report debrief process, those modifications will be reflected in next year's annual report.

Adaptive Management

During FY 2011, the City applied adaptive management to their program by utilizing findings from the FY 2010 Baseline BMP and BMP Efficiency to modify their program implementation. This is a direct result of applying the process shown in **Figure 12-1** above.

By using the assessment information collected through the annual reporting process, studies and investigations, the City can best plan the use of its limited resources to improve overall program effectiveness. **Table 12-4** lists the changes to the City's program that were implemented in FY 2011 based upon the adaptive management approach and process.

Table 12-4: Adaptive Management Program Modifications

Program Element	Management Program Modifications	Basis for Modification	Expected Outcome
Implemented Program Modifications			
Land Development	Revisions to TCBMP prioritization system	Previous system did not yield high priority sites for inspection purposes	Improved performance of TCBMPs because sites with high priority designation will be inspected more frequently to determine proper maintenance and effectiveness
Land Development	Modified standard cover sheet for plans for development projects to include standard "Storm Water Requirements" notes that include applicable development and construction requirements	Increase awareness of requirements	It is anticipated that the increased awareness of project specific requirements will lead to accurate inspections during construction of development projects
Land Development	January 2011 Updates to City's Storm Water Standards, including: 1. Previous language allowing either trash dumpster lids or a roof over the enclosure was revised to clarify that dumpster lids are always required, and a roof or awning may be required at the City's discretion for high usage trash storage areas (see Sect. 4.2.7) 2. Source control measures originally titled "Non-retail Fueling Areas" has been retitled to "Retail and Non-Retail Fueling Areas" (see Sect. 4.2.4) 3. A requirement to manage air conditioning condensate was added (see Sect. 4.2.13) 4. Guidance was added to avoid use of roofing and roof drainage materials that contain copper or galvanizing (see Sect. 4.2.14) 5. Added requirements for post construction soil stabilization and installation of pet waste collection dispensers where applicable (see Sect. 4.2.15)	The results of a property-based inspection study yielded collateral results pertaining to structural features at existing development sites. One example that was subsequently addressed was trash lids for dumpsters – lids were previously a selection between two BMPs that a developer could select. Now it is a requirement for all new development and significant redevelopment. Other changes to the Storm Water Standards were implemented as a result of ongoing input from other storm water program areas.	Improved source control from trash storage areas.
Street Sweeping	The City utilizes vacuum sweepers on an additional 12 routes compared to FY 2010	The results of a street sweeping pilot study demonstrate that vacuum sweepers are more effective than mechanical sweepers at removing debris and fine particulates (including metals) along flat routes with good road surface conditions and well-defined curb and gutter.	This sweeping modification will allow the City to benefit from improved water quality without impacting existing budgets and resources.

Planned Program Modifications			
Industrial/ Commercial	The City is considering implementation of property based inspections in FY2012 and incorporating site specific conditions such as outdoor activities and locations of physical structures into the prioritization process for inspections.	An inspections program pilot activity focused in specific watersheds found that many BMP issues occur in common/shared areas where a business cannot always be identified as the responsible party. By focusing on the properties during the inspections, the property owner/manager becomes the responsible party for final compliance in the common areas.	A greater efficiency may be achieved for the amount of resources needed and the quantity of businesses inspected by utilizing the property inspection methodology; thereby, providing the ability to inspect more property and business areas and activities per visit, potentially leading to program efficiency and effectiveness.
Rain Barrel Rebate Program/ Water Systems	The Storm Water Division is working with Public Utilities on incorporating rain water capture devices (such as rain barrels) and downspout disconnections into the ongoing Outdoor Water Conservation Rebate Program. Storm Water Division is developing specifications for the installation of these types of devices to ensure efficient devices. This project is being planned for FY12.	The Municipal Rain Barrel Installation Project, completed in FY2010, showed that rain barrels are a viable option for reducing volume of rain water discharging to the storm drains. The project concluded that rain water capture devices that had an overflow or open spigot releasing water to landscaped areas were most efficient.	Reduction in the volume of wet weather flows into the storm drain system.
Land Development	During the CLRP development, the Storm Water Division will consider and coordinate modifications to the City's Municipal Code, guidelines, policies, and land development/planning trainings regarding LID implementation.	The Storm Water Division assessed the City's Municipal Code and supporting guidelines and policies to find any barriers to the implementation of LID. Active and passive barriers were identified through this process.	Greater implementation of LID which will help improve water quality.
Future Potential Program Modifications			
Street Sweeping	The City is considering the following future program modifications to its street sweeping program: • Transition fleet of sweepers to a more equitable mix of vacuum and mechanical sweepers (target = 50% vacuum, 50% mechanical); • Connect with communities interested or requesting more aggressive (e.g., 1x/week) sweeping; • Identify commercial and industrial routes for aggressive (e.g., 2x/week) sweeping; and • Regularly sweep center medians along targeted high-traffic roadways.	These long-term, programmatic modifications to the City's street sweeping program will impact future fiscal year budgets. Therefore, the City will be comparing the cost-effectiveness of these potential program modifications with other BMPs in order to make comprehensive and balanced decisions that will help meet both current and future quarter quality regulations. However, the preliminary results from the City's street sweeping pilot studies indicate that these potential modifications may result in improved water quality at a relatively low cost, and therefore warrant further analysis.	These potential program modifications may result in improved water quality by removing more pollutants and debris from City roadways.

The City continued to implement BMP Efficiency Assessments (pilot studies and special investigations) during the FY 2011 reporting period. As previously stated, the majority of these will be presented and assessed as individual WURMP Activities. Additionally, as more data and information is collected regarding the modified program elements, the City will report on the effectiveness of the program modifications.

13 JURMP REVISIONS

In order to improve the efficiency and effectiveness of the City's efforts in protecting and improving storm water quality, the City updated its JURMP in March 2008. Additional revisions since the 2008 update may be made as necessary, and **Table 13-1** summarizes the revisions made during FY 2011 (specific language changes are in **Appendix Q**).

Table 13-1: FY 2011 Summary of JURMP Revisions

JURMP Section	JURMP Revisions
Appendix VIII	Storm Water Standards Manual, updated January 2011
Appendix XIV	Revise "Are storm drains stenciled" to "Are storm drain inlets stenciled?"
2.0	Section revision to reflect departmental organizational changes and responsibilities that have occurred since the 2008 JURMP
4.4.4 Development Project Approval and Verification Process Program Implementation	A description of how the development projects required to undergo the urban runoff approval process and meet the applicable project requirements is tracked has been added.
4.4.4 Development Project Approval and Verification Process Program Implementation	A description of how the tracking of all applicable SUSMP BMP requirements are applied to all priority development projects has been added.
4.4.4.4 Treatment Control BMP Maintenance Tracking	A description of the annual verification of operation and maintenance of treatment control BMPs, including a summary of verification results and findings has been added.
4.4.4.5 Inspection and Enforcement of BMPs	A description of methods of tracking for BMP verification for all priority development projects prior to occupancy has been added.
6.14 Streets/Storm Drain Conveyance System	Section revision to reflect the departmental organizational changes and responsibilities that have occurred since the 2008 JURMP.
7.1 Introduction	Clarification on which inspectors other than Storm Water Inspectors who assist in meeting storm water requirements has been added.
7.2.4.2 Inspection Frequencies	Additional justification and rationale has been added for why the industrial and commercial sites/sources inspected were chosen for inspection when not deemed a high threat site.
7.2.4.6 Enforcement of Regulations at Industrial and Commercial Facilities	A description of steps taken to identify non-filers and a list of non-filers (under the General Industrial Permit) identified by the Copermittees has been added.

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14 CONCLUSIONS AND RECOMMENDATIONS

14.1 SUCCESSES AND CHALLENGES

14.1.1 Successes

This reporting period the Storm Water Division modified its reporting format to tabulate applicable data and information to streamline the report presentation. This provides an effective and concise means for presenting program data to the reader to illustrate compliance with the Municipal Permit.

Special projects are an integral tool in the City's effort to leverage limited resources with grant dollars and partnerships with environmental organizations and agencies. During FY 2011, the Storm Water Division participated in seven Total Maximum Daily Load (TMDL) programs (either through implementation or development of TMDLs) and numerous special water quality monitoring investigations to determine the sources of various storm water quality problems. Special projects are also important for providing information on potential adaptive management program modifications. An example of a special project resulting in changes is the Street Sweeping Special Study. The results of this study demonstrated that vacuum sweepers are more effective than mechanical sweepers at removing debris and fine particulates (including metals) along flat routes with good road surface conditions and well-defined curb and gutter. As such, during FY 2011 the City utilized vacuum sweepers on an additional 12 routes compared to FY 2010. This sweeping modification will allow the City to benefit from improved water quality without impacting existing budgets and resources.

In addition, the Storm Water Division achieved significant benefits to storm water quality beyond its budget by leveraging special projects. Specifically, over the course of several years in many cases, the City has received approximately $3.77 million in grant funds, supplemented by approximately $1.47 million in City and partner agency matching funds. The grants, which generally span multiple years, helped further the City's clean water efforts in San Diego Bay, Tijuana River, and Mission Bay watersheds.

The Storm Water Division achieved many other successes in implementing the JURMP in FY 2011.

- Removed 52,586 tons of debris, anthropogenic litter, and sediment from City catch basins, inlets, cleanouts and open channels.
- Removed 5,630 tons of debris from City parking lots and streets.
- Continued its efforts to seek out and abate illegal discharges; and was responsible for issuing 304 notices of violation, 158 citations, and conducted 664 follow-up inspections for FY 2011.
- The *Think Blue* messaging effort provided approximately 8,758,381 impressions from placement of PSAs on media websites.
- The *Think Blue* storm water education campaign made contact with approximately 2,982,100 individuals through special events.
- Revised and completed new annual reporting forms to facilitate easier and more accurate data collection for the City's JURMP Annual Report.
- The City has also reduced the number of sewage spills between 2000 and 2011 (see **Figure 14-1**).

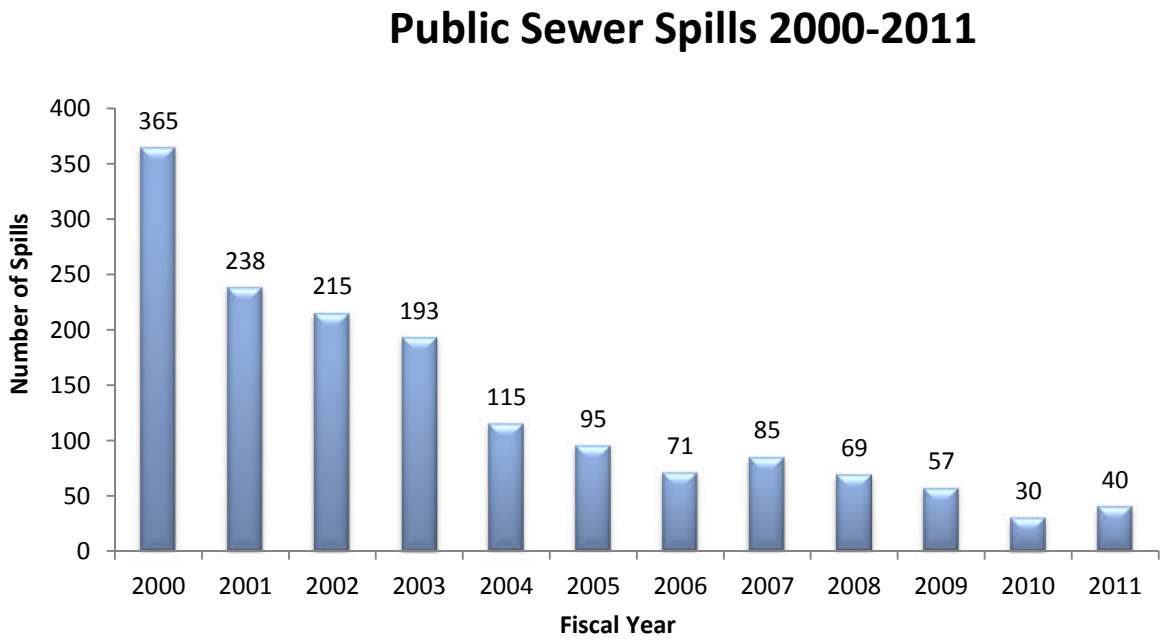

Figure 14-1: Number of Public Sewer Spills in the City between 2000 and 2011

14.1.2 Challenges

Although the City's programs are continually implemented, there are still many challenges that pose issues to staff and the functionality of certain aspects of the program. Some of these challenges are discussed below.

In addition to the Municipal Permit, the City must also simultaneously comply with the requirements of other regulatory programs, such as Areas of Special Biological Significance (ASBS), TMDLs, and Clean-up and Abatement Orders (CAOs). Although these regulatory programs are separate from the Municipal Permit, their ultimate goal is the same—the improvement and protection of the region's water quality. The convergence of these regulatory programs mandates that the City devote resources to advance planning efforts and nurture even stronger bonds and partnerships with other stakeholders in the region to achieve its goal of improved storm water quality.

The City faces significant challenges in effectively gathering and managing storm water program data. With a growing population of over 1.2 million residents and 237 square miles of urbanized development, the City is larger than other incorporated jurisdictions in the region. The enormity of the data management challenge is something the Storm Water Division and other departments are continually working to improve. For example, DSD must manage data from 100,000 inspections per year and are continuously working on improvement to its data tracking systems. The Storm Water Division will continue to focus on data management and the standardization of data collection and will continue to closely coordinate with other Departments.

The City of San Diego has a sizeable inventory of municipal facilities, and during FY 2011 99% of municipal facilities received two inspections. In order to ensure that inspections are conducted in accordance with the City's JURMP during the next reporting period, the Storm Water

Division sent out a memorandum in August 2010 to all departments reminding staff of the inspection requirements for municipal facilities and rainy season requirements. A second reminder was also sent towards the end of September 2010. The Storm Water Division plans to send out these reminders annually. The Storm Water Division will also meet with the Department's Storm Water liaisons twice a year, and staff will be available to conduct training via walk-along inspections of municipal facilities.

Lastly, Treatment Control BMPs have posed significant issues for the City. It has been acknowledged that the City's tracking systems related to treatment control BMPs needed improvement. This issue has permeated throughout several City departments and elements of the program. During FY 2011, the Storm Water Division conducted an investigation of its TCBMP inventory to refine the inventory and remove standard projects that did not require TCBMPs. Additionally, the prioritization system developed in 2007 for TCBMPs yielded no high priority sties. The Storm Water Division worked on updating the prioritization system and the finalized system was implemented at the beginning of FY 2011.

14.2 FUTURE RECOMMENDATIONS

To continue to improve program efforts, the Storm Water Division has identified four major program goals, as detailed below.

1) *Continue strategic approach to program planning and implementation (Municipal Permit, ASBS, and TMDLs).* The water quality regulatory programs, namely: the Municipal Permit, TMDLs, ASBS, and CAOs, have often times set stringent water quality standards that the City must meet. In order to meet the requirements, it is necessary to implement structural (e.g., CIPs) and non-structural (e.g., education and outreach, street sweeping) activities. The City will continue to closely coordinate programs in order to try to avoid overlapping efforts, wasted resources, and loss of time. This will be particularly important as the City has begun the process of developing a Comprehensive Load Reduction Plan as part of the Bacteria TMDL for the City's watersheds. The City is employing an integrated approach towards meeting the requirements of these regulatory programs simultaneously.

2) *Improve data management, reporting and assessment.* The City will be working with the other Copermittees in refining their reporting and effectiveness assessment standards to facilitate cross-jurisdictional and cross-programmatic comparisons and evaluations. The refined standards will lead to a more regionally-integrated approach to storm water quality improvement efforts. In addition to continued inter-jurisdictional cooperation, the Storm Water Division will continue to increase coordination with other City departments to ensure permit compliance and data collection. The Storm Water Division will also look for methods to modify and improve data gaps and collection procedures to assist in activity and program effectiveness assessment.

3) *Refine municipal inspection program.* The Storm Water Division will continue to work with departments to ensure that the City meets its inspection requirements as outlined in the City's JURMP. Specifically, the Storm Water Division will send out reminders citywide about Municipal Permit responsibilities in FY 2012.

4) *Implement Adaptive Management Program Modifications.* The Storm Water Division will continue to evaluate results and information from special studies, pilot projects, and general program implementation to identify adaptive management opportunities to improve program effectiveness and efficiency.

In conclusion, this FY 2011 demonstrates the City's compliance with the Municipal Permit and continued success in the implementation of the City's 2008 JURMP. The City is committed to implementing and improving pollution reduction efforts by utilizing iterative implementation strategies, identifying areas for improvement, collaborating with other Copermittees, and maximizing program efficiencies.